# CROSS-LINGUISTIC INFLUENCE IN THE ACQUISITION OF BRAZILIAN PORTUGUESE AS A THIRD LANGUAGE

BY

HELADE SCUTTI SANTOS

DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Spanish
in the Graduate College of the
University of Illinois at Urbana-Champaign, 2013

Urbana, Illinois

Doctoral Committee:

Professor Silvina Montrul, Chair
Associate Professor Tania Ionin
Assistant Professor Jonathan MacDonald
Assistant Professor Rebecca Foote

# Abstract

This dissertation investigates the acquisition of properties of the dative alternation in Brazilian Portuguese (BP) by L1 Spanish/L2 English and L1 English/L2 Spanish speakers who are learning Portuguese as a third language (L3). This work contributes to a better understanding of which factors determine cross-linguistic influence in the multilingual mind and what the role of previously acquired languages is in the acquisition of any language beyond the L2. The three languages of the multilingual participants have dative alternation, although it presents different properties in each language. English verbs with two internal arguments can alternate between a prepositional object construction (POC), which consists of a V DP PP, as in *Mary bought a gift for John*; and a double object construction (DOC), which consists of a V DP DP, as in *Mary bought John a gift*. DOCs are also present in Spanish (Demonte 1995, Masullo 1992, Bruhn de Garavito 2000, Cuervo 2003) and Portuguese (Torres Morais 2006, Torres Morais & Salles 2010). In these languages DOCs consist of structures with dative clitics and/or DPs marked for dative case by the dative case marker *a*, as in *María **le** compró un regalo **a** Juan* 'María **DAT CL** bought a gift **DAT case marker** Juan.' DOCs can alternate with POCs in Spanish and Portuguese as well, but there are cross-linguistic differences not only in grammatical encoding but also in productivity of DOCs in English, Spanish and BP.

First, this study provides an analysis of properties of the dative alternation in BP based on empirical data collected from BP native speakers in two different studies. Results of two written acceptability judgment tasks and an oral picture description task

have shown that 1st person dative clitics with the role of goal are still productive in written and oral discourses. Third person dative clitics and datives with the roles of benefactive and source are accepted in written and formal register but are not produced in oral and colloquial discourse by BP native speakers. Possessor datives are no longer available in the BP grammar. This indicates that BP is losing the 3rd person dative clitic and the possibility of expressing 1st and 2nd person indirect objects with dative clitics when they are not core arguments of the verb.

Second, a written grammaticality judgment task, a written acceptability judgment task and an oral picture description task were used to test L3 BP learners' knowledge of the dative alternation in BP and transfer from either Spanish or English. The L3 learners' intuitions and oral production in BP were compared to their perception of distance between Spanish and Portuguese and English and Portuguese. Perception of language distance was assessed using a language distance questionnaire. Results demonstrate that the L3 BP learners have acquired properties of the dative alternation in BP but still made errors and over-accepted ungrammatical constructions in BP. Negative and positive transfer from both Spanish and English was attested. A comparison between the results of the linguistic tasks and the answers to the language distance questionnaire indicates that amount of transfer is not related to perception of language distance. Based on the results of the present study, it is proposed that multilingual speakers transfer from the steady-state system of any previously learned language and language transfer may have positive as well as negative effects. It is also hypothesized that whether and which previously acquired linguistic systems will be activated in the multilingual mind and will be more likely to influence the acquisition and use of the L3

depends on a dynamic process. Different factors can interact and determine processes of language transfer, including but not limited to order of acquisition, language proximity and level of proficiency in the L2 and the L3.

# Acknowledgments

I would like to start by thanking my advisor, Silvina Montrul, not only for her help with my research project but also for teaching me so much about what it takes to be a productive and successful scholar. Since my first semester in graduate school she believed in me and gave me valuable opportunities to participate in more than one of her research projects. These opportunities were key for my growth as a researcher because I was able to see the whole development of a research project, since its idealization until the publication of the results.

I want to thank Jonathan MacDonald and Abbas Benmamoun as well for their valuable help with the syntactic descriptions and analyses that are in the first part of this dissertation. This was definitely the most laborious part of my research because I am not a syntactician but still decided to venture into the field of Syntax. Also, a very special thanks to Tania Ionin who was like a co-adviser to me. From her I learned a lot about experimental methodology and data analysis. Furthermore, the idea for my dissertation research was born in one of her courses and her thoughtful comments and suggestions helped me to convert a final paper in a broader research project. There are at least two other professors in SIP who gave me academic, professional and emotional support throughout graduate school: Melissa Bowles and Ann Abbot.

I am also very grateful to all the participants who completed my experiments and to the people who helped me contact them, including Melissa França, Maurício Pimentel and Max Pendergraph. Without their help this dissertation wouldn't have been possible. I can't forget mentioning all the institutions that have provided me with essential

financial support. Their support allowed me to spend more time on my research and gave me the necessary resources to collect the data I needed. Thanks to the Spanish Italian and Portuguese Department, to the Center for Latin American and Caribbean Studies, to the Lemann Institute for Brazilian Studies, to the School of Literatures, Cultures and Linguistics and to the Graduate College of the University of Illinois for the fellowships and grants they awarded me.

I don't forget all the friends I have made in Champaign-Urbana; especially those who started graduate school with me. It has been a long journey, but it has certainly been much easier because we could share our experiences and feelings. My family in Brazil also deserves all my gratitude, because although they miss us a lot, they were always supportive and loving.

Finally, I would like to thank my children Clarice and Antonio and my husband Fernando, for being the most wonderful family that anybody could have. I feel so fortunate to have had a daughter while I was doing my PhD, because since she was born she doesn't stop reminding me that life is much more than studying and doing research. I am also very fortunate to have had a patient son, who waited until after the defense to be born. However, none of this would have even started if Fernando didn't exist in my life. He has been the most wonderful, supportive and loyal partner and I couldn't have come this far if he was not on my side. I am also deeply thankful to him for having actively discussed my data with me and for having helped me with preliminary numerical analyses.

# Table of Contents

# Chapter 1:

# Introduction

Motivated by the increased number of multilingual speakers, in recent years linguists have begun to distinguish between the acquisition of a second language (L2) and the acquisition of additional languages beyond the L2, also referred to as multilingualism or third language (L3) acquisition. L3 learners have a different set of cognitive skills and language learning experiences when compared to L2 learners (Grosjean 1992), making the process of learning an L3 different from learning an L2 in important ways. For instance, it has been found that knowing an L2 facilitates and accelerates the rate of acquisition of the L3. That is, L3 learners have an advantage over L2 learners in that they tend to perform at a more target-like level on different linguistic measures (Klein 1995, Sanz 2000, Flynn et al. 2004, Leung 2005).This is why scholars within the language acquisition field have presented several arguments for distinguishing L2 and L3 acquisition. One of them is related to methodological rigor (De Angelis 2007, García Mayo 2012, García Mayo & Rothman 2012). Because L2 learners' and L3 learners' prior linguistic knowledge and experience is not the same, and this previous knowledge and experience may have an important effect on the acquisition of subsequent languages, not only do researchers have to provide detailed information about participants' linguistic background in every L3 study, but they also have to develop specific methodologies to test knowledge of additional languages beyond the L2. This means, for instance, assessing the level of proficiency of the L2. Another aspect that differentiates L2 and L3 acquisition is language transfer. This is because L3

learners have access to two or more linguistic systems that could potentially influence the development of the L3 interlanguage (García Mayo & Rothman 2012). Due to the extra layer of complexity that cross-linguistic influence has in the case of multilingual speakers, and because the specific source of transfer can only be examined deeply when at least three linguistic systems can potentially interact, L3 acquisition presents the ideal conditions to examine the factors that determine language transfer. Language transfer has been investigated in many different bilingual situations, such as the L2 influencing the L1 (e.g. Pavlenko 2000, Döpke 2000, Müller & Hulk 2001, Cook 2003, Montrul 2004, 2010b, Montrul & Ionin 2010), as well as the L1 influencing the L2 (e.g. White 1991, Bruhn de Garavito 2000, Montrul 2000, Whong-Barr & Schwartz 2002, Slabakova 2006, Cuervo 2007, Oh 2010 to mention just a few). However, in the case of bilinguals, there is only one potential source of transfer, which cannot provide much information about multilingualism, in which there are two or more potential sources of transfer. Furthermore, examining cross-linguistic influence on multilinguals can advance a better understanding of the language architecture in the human mind.

Thus far, research on cross-linguistic influence in multilinguals has presented different and somewhat conflicting findings. Some studies on a variety of morphosyntactic aspects found that transfer comes preferably from the L1 (Lozano 2002, Jin 2009, Na Ranong & Leung 2009), whereas others found that transfer comes mainly from the L2 (Bardel & Falk 2007, Rothman & Cabrelli Amaro 2010, Falk & Bardel 2011, Jaensch 2011). A most prominent role for the L2 or the most recent acquired language is precisely what the L2 Status Factor hypothesis proposes (Bardel & Falk 2007, Falk & Bardel 2010). According to this model, the L2 acts as a filter and blocks

access to the L1 grammatical features due to similarities between the L2 and L3 acquisition. Moving away from a position in which order of acquisition is taken as the main factor determining cross-linguistic influence, there is evidence that transfer can come from either the L1 or the L2 (Flynn et al. 2004, Flynn 2009, Foote 2009, Rothman 2010, 2011, Montrul et al. 2011, Ionin et al. in press among others). Two different hypotheses were formulated to account for language transfer that was not determined by order of acquisition. The Cumulative-Enhancement Model (Flynn et al. 2004) predicts that transfer can come from any of the previously acquired languages and will always have a positive effect or remain neutral. Lastly, the Typological Primacy Model (Rothman 2011) also maintains that both the L1 and the L2 are potential sources of transfer into the L3. However, according to the latter model, transfer is constrained by (perceived) typological proximity, and once the internal parser assesses which language is typologically closer, transfer will come only from this linguistic system.

Although these conflicting findings may be due to different methodologies employed and different experimental factors, divergent hypotheses show that the question about which factors determine transfer in the case of multilingual speakers is far from having a categorical answer. It is not clear yet what the main source of language transfer in L3 acquisition is and whether and how it differs depending on the linguistic level of analysis (e.g. lexical, morphosyntactic, semantic) that is being considered. In addition, regarding more specifically the role of psychotypology, or perception of language distance, in cross-linguistic influence, it still remains to be tested what type of perception learners have about similarities and differences between the languages they know and/or are learning. It has been taken for granted, for example,

that perception of structural similarity derives directly from the typological relationship between the languages as described by linguists. Moreover, it has not been studied yet if psychotypology is only based on general properties of languages or if one specific aspect such as the lexicon, the sounds, or the grammatical structure is more influential on the way learners perceive how similar or different languages are. Investigating in depth these and other key questions related to cross-linguistic influence will not only add to a better understanding of L3 acquisition itself, but will also shed light on the debate of what variables determine language transfer in non-native language learning and use in general.

In addition to reexamining cross-linguistic influence in L3 acquisition, this study attempts to test empirically whether perceived distance between languages affects language transfer. This will be done by analyzing the acquisition of Brazilian Portuguese (BP) by a group of L1 English/L2 Spanish and a group of L1 Spanish/L2 English speakers. The context of Portuguese courses in the U.S., where most learners already know at least two languages —English and, in most cases, Spanish— is not only a favorable scenario to address language transfer in L3 acquisition, but it also demands a better understanding of the acquisition of Portuguese. Although Portuguese is part of the language combination of a growing body of research in L3 acquisition (see Carvalho & Silva 2006, Rothman 2010, 2011, Montrul, Dias, et al. 2009, 2011, Ionin et al. 2011 among others), it is still an understudied language. More research is needed in the acquisition of Portuguese as a non-native language, and particularly on the acquisition of Portuguese as an L3.

With respect to the linguistic phenomenon examined, this study focuses on the acquisition of the dative alternation in BP. In the L3 acquisition field there is more research on lexical acquisition and transfer than on the acquisition and cross-linguistic influence at the lexico-semantic and syntactic[1] interface. Therefore, to better understand how an L3 is learned and what drives processes of language transfer, more investigation on the L3 acquisition of syntactic and semantic aspects needs to be done. Furthermore, the dative alternation is a syntactic phenomenon that is present in the three languages under investigation, yet exhibits different properties in each language. Although BP and Spanish are Romance languages with great chance of being perceived as very similar because they share vocabulary and morphosyntactic structures, BP has been undergoing processes of parametric change and reanalysis in subject expression (Duarte 1993, Duarte 2000), object expression (Cyrino 1993, Cyrino 1997, Pagotto 1993), the fixing of word order towards SVO constructions in declarative and interrogative sentences (Berlinck 1988, Duarte 1992), and the weakening of the agreement system (Galves 1993), among others[2]. Some of these ongoing changes have been making BP more similar to English than to Spanish in a variety of grammatical areas. In the specific case of the dative alternation, BP resembles Spanish in some aspects but English in others, thus making the dative alternation an ideal grammatical aspect to evaluate whether structural proximity facilitates language transfer.

[1] See *Second Language Research* 27 (1). Special Issue: The generative study of L3 acquisition for a review of recent works on morphosyntactic transfer in L3 acquisition.

[2] See Tarallo (1993) for a review of on related processes of language change that happened in BP grammar between the 19th and the 20th centuries.

The study used an experimental methodology. L3 BP learners were asked to complete a grammaticality judgment task (GJT), an acceptability judgment task (AJT), two picture description tasks (one in Spanish and one in Portuguese), and a language distance questionnaire. The GJT, the AJT and the language distance questionnaire were presented in written format and the picture description tasks were completed orally. The use of different tasks in this study is motivated, on the one hand, by the fact that the use of dative constructions in BP differs greatly in the formal and the colloquial discourses. Thus, at least a written and an oral task had to be designed to test language acquisition and transfer in both registers. On the other hand, differences in the dative alternation in Spanish, English and BP are related not only to grammatical encoding but also to which of the structures that participates in the alternation is the preferred option depending on properties of the verb and the indirect object. To look at whether BP learners allow ungrammatical structures in more metalinguistic tasks and also produce them when they are more focused on the meaning than on the construction of the sentence, judgments and controlled oral production were combined.

Finally, because the dative alternation in BP has not received much attention in the literature, this study also included two experiments with native speakers in order to arrive at an accurate description and analysis of this linguistic phenomenon. These studies form the baseline for comparing the developing grammars of L3 learners.

To sum up, by proposing a morphosyntactic analysis of the dative alternation in BP and examining the acquisition of its properties by L1 English/L2 Spanish and L1 Spanish/L2 English learning L3 BP, the present study contributes both to the description of Portuguese grammar and to debates on current theoretical issues in multilingual

acquisition. In addition, it can also help to build a better understanding of how Portuguese is acquired by adults learning a non-native language, which is crucial to inform pedagogical practices related to the teaching of Portuguese.

As for the analysis of the dative alternation in BP, the results indicate that BP is losing the possibility of expressing indirect objects with dative clitics when they are not core arguments of the verb. With respect to the acquisition of L3 BP, the findings indicate that cross-linguistic influence in multilingual speakers may come from the steady-state system of any previously learned language and can have positive as well as negative effects on language learning and use. It is also hypothesized that whether and which previously acquired linguistic systems will be activated in the multilingual mind and is more likely to influence language acquisition and use depends on a dynamic interaction among different factors, including but not limited to order of acquisition, language proximity and level of proficiency in the L2 and the L3. It may also depend on the linguistic domain.

This dissertation is organized as follows. Chapter 2 presents a literature review of the dative alternation in the three languages under investigation: English, Spanish and Portuguese. Chapter 3 reports the results of the two studies with BP native speakers, discusses the findings of these studies and proposes an interpretation of the dative alternation in BP. Chapter 4 presents a review of previous findings and different accounts of cross-linguistic influence in L3 acquisition. Chapter 5 presents a brief review of studies on the acquisition of English double object constructions and the acquisition of Spanish dative constructions by native speakers of English, and reports on the results of the study on the acquisition of the dative alternation in BP by L3 BP learners.

In Chapter 6, a brief summary of the findings is presented and the results of the study with L3 BP learners are discussed more in depth.

# Chapter 2:

# The syntax of the dative alternation in English, Spanish and Portuguese

## 2.1. Introduction

This study is concerned with the dative alternation in three languages. In general, the dative alternation applies to verbs that express change or transfer of possession (Levin 1993). The verbs that enter into the dative alternation have two internal arguments: a direct and an indirect object. In English the thematic roles associated with these arguments are recipient and theme. These verbs can alternate between a V DP PP construction, in which the DP is the direct object and the PP is the indirect object, as in (1) and (3), and a V $DP_{recipient}$ $DP_{theme}$, in which the indirect object appears before the direct object and is not introduced by a preposition, as in (2) and (4). The first one will be referred to as prepositional object construction (POC) and the second one is known as double object construction (DOC). A DOC whose POC counterpart has the indirect object introduced by the preposition *to* is termed as *goal DOC* and a DOC whose POC counterpart has the indirect object introduced by *for* is called *ben(efactive) DOC*. Such alternation between a POC and a DOC is traditionally known as the dative alternation.

(1) Mary sent [$_{DP}$ a letter] [$_{PP}$ to her mother]. (*to* POC)

(2) Mary sent [$_{DPrecipient}$ her mother] [$_{DPtheme}$ a letter]. (goal DOC)

(3) John baked a cake for his daughter. (*for* POC)

(4) John baked his daughter a cake. (ben DOC)

At the surface level differences between the two constructions are reduced to word order and the absence of a preposition in the DOC. However, there are other syntactic differences between these two constructions. There is syntactic evidence that the $DP_{theme}$ c-commands the DP introduced by the preposition in the POC, whereas in the DOC the $DP_{recipient}$ c-commands the $DP_{theme}$ (Barss & Lasnik 1986). Furthermore, the $DP_{recipient}$ shows three canonical object properties in the DOC: it receives structural case from the verb, it is adjacent to the verb, and it can be passivized (Cuervo 2003).

For a long time it was believed that Romance languages differed from Germanic languages because they lack DOCs (Kayne 1984, Larson 1988, Baker 1988). According to Kayne (1984), there is an empty preposition in DOCs that inherits case from the verb and assigns it to the indirect object. This is possible in Germanic Languages such as English, Dutch and Danish because the preposition that introduces the indirect object and the verb both assign structural case. On the contrary, the preposition and the verb do not assign case in the same way in Romance Languages, which makes DOCs impossible in Romance Languages (Kayne 1984). Nevertheless, after Marantz (1984, 1993) described the syntax of applicative constructions and proposed that the indirect objects in English DOCs are non-core arguments introduced by applicative phrases with a non-overt applicative marker, other linguists identified dative alternations of this sort in a variety of languages; including Romance languages such as Romanian (Diaconescu & Rivero 2007), Spanish (Demonte 1995, Masullo 1992, Bruhn de Garavito 2000, Cuervo 2003), and Portuguese (Torres Morais 2006, Torres Morais & Salles 2010). For example, Demonte (1995) and Cuervo (2003) have demonstrated that Spanish dative constructions exhibits some of the same syntactic properties present in English DOCs.

These include c-command asymmetries between the direct object and the indirect object, and the fact that adding a locative phrase is restricted to DOCs in English as well as in Spanish. That is, the addition of a locative phrase to POCs generates ungrammatical sentences in both languages (Cuervo 2003), as shown in (5) and (6).

(5) a. Stephanie sent Daniel a letter to his office.[3]

b. *Stephanie sent a letter to Daniel to his office.

(6) a. Pablo le mandó un diccionario a Gabi a Barcelona.
Pablo DAT CL sent a dictionary DAT case marker Gabi to Barcelona
'Pablo sent Gabi a dictionary to Barcelona.'

b. ??/*Pablo mandó un diccionario a Gabi a Barcelona.
Pablo sent a dictionary to Gabi to Barcelona
'Pablo sent a dictionary to Gabi in Barcelona.'

Therefore, according to analyses of DOCs as applicative constructions, English, Spanish and Portuguese can add a non-core argument or an indirect object to the argument structure of a verb. The additional argument is called *applied* argument and is licensed syntactically and semantically by an applicative head (Pylkkänen 2002, 2008, Cuervo 2003). According to Pylkkänen's (2002, 2008) analysis, English DOCs are applicative constructions in which the indirect object is an intended recipient of the direct object, as in (2) and (4). Cuervo (2003) and Torres Morais (2006), following Pylkkänen (2002), argue that Spanish and European Portuguese (EP) dative constructions have the same semantic and syntactic properties of English DOCs.

In this chapter I will briefly describe the properties related to the dative alternation in English, Spanish and Portuguese and discuss cross-linguistic differences on

[3] Examples in (5) and (6) are taken from Cuervo (2003, p.49).

grammatical encoding, productivity, and meaning of the constructions that participate in the alternation in each language. First, I will describe different approaches to the English dative alternation. Second, I will show that some of the analyses of English DOCs can also account for dative constructions in Spanish and EP. Finally, I will highlight differences and similarities between Brazilian Portuguese (BP) and EP on productivity and use of DOCs.

## 2.2. Different approaches to the English dative alternation

Many different analyses have been proposed to account for syntactic and semantic aspects of this kind of alternation. According to the derivational approach, the sentences built with verbs that participate in the dative alternation are (truth-functionally) synonymous or thematic paraphrases and, therefore, their structures are derivationally related[4] (e.g. Baker 1988, 1997, Larson 1988, 1990, Aoun & Li 1989). Larson's (1988, 1990) passive-like movement of dative shift, and Baker's (1988, 1997) incorporation theory share the assumption that the POC is basic and the DOC is derived. Aoun and Li (1989), on the other hand, propose that the POC derives from the DOC.

[4] One of the main criticisms to the derivational approaches is that they cannot capture differences in interpretation between the POC and the DOC variants. In addition, a derivational analysis presupposes that one structure is basic and the other is derived, which is hard to sustain because just like there are verbs that do not accept the DOC, as in (i), there are verbs such as *deny* in (ii) and expressions like *give a headeache* in (iii) that do not allow the paraphrase with the PP (Goldberg 1995).

(i) a. Ann pulled the car to Beth. (from Krifka 2004, p.2)
b. *Ann pulled Beth the car.

(ii) a. Ann denied Beth the ice cream. (from Krifka 2004, p.2)
b. *Ann denied the ice cream to Beth

(iii) a. She gave me a headache/a kiss/an idea. (from Goldberg 1995, p.106)
b. *She gave a headache/a kiss/an idea to me.

Other authors argue that alternating verbs are compatible with two distinct argument structures that are not derivationally related (e.g. Pinker 1989, Pylkkänen 2002, Harley 2002, Beck & Johnson 2004, Krifka 2004). Each structure has its own syntactic and semantic properties. This view holds that there is a difference in meaning between the two constructions when verbs allow both the DOC and the POC. The DOC basically means that an agent performs an act on an object with the intention of (metaphorically) transferring it to a third party, whereas the POC means that an agent intends to move an object to a goal (Pinker 1989, Goldberg 1995, Pylkkänen 2002, Harley 2002, Beck & Johnson 2004, Krifka 2004). That is, the DOC always entails a transfer sense, and the indirect object is the intended recipient or the potential possessor of the direct object. This meaning, however, is not present in the POC. Thus, when the verb alternates between the POC and the DOC, each construction entails different meanings and interpretations. The example (7b) implies that the students actually learned some French, whereas (7a) may be true even if the students did not learn any French. This is compatible with the idea that in the DOC *the students* have a role of intended possessor, while in the POC they have only a location role.

(7) a. Beth taught French to the students.

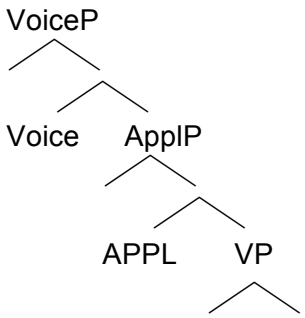
b. Beth taught the students French.

As previously mentioned, Pylkkänen (2002, 2008) agrees that the relations between the two DPs in the DOC can be represented in an applicative structure. She proposes two different types of applicative heads: the high and the low applicative. The former attaches above the VP and denotes a thematic relation between an individual

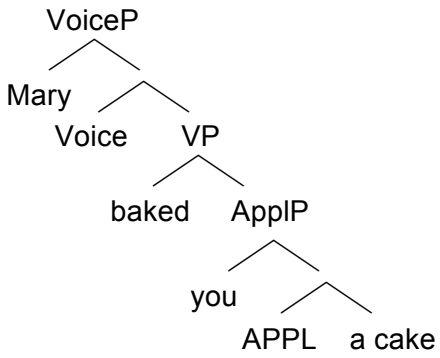
and the event described by the verb.[5] The low applicative head, on the other hand, attaches below the verb and relates an individual in the spec position of the applicative phrase with the direct object denoting a transfer of possession relation between the direct object and the applied argument. The two applicatives are represented in Figure 1.

*Figure 1: Trees representing High and Low Applicative Phrases*

**High applicative**




**Low applicative**




Within the low applicative phrases, Pylkkänen (2002, 2008) makes a semantic distinction based on the type of relation between the indirect and the direct objects. In the low recipient applicative (low APPL-TO), the indirect object is an intended recipient of the direct object; which is exactly the case of English DOCs. In the low source applicative (low APPL-FROM), the indirect object bears a source relation to the direct object. English does not select the latter kind of low applicative. Since English selects only low APPL-TO, English DOCs are possible only when the indirect object is the potential possessor or the intended recipient of the direct object and receives the thematic role of either goal, as in (8), or beneficiary, as in (9). Restrictions related to the productivity of DOCs in English follow from syntactic and semantic properties of low

[5] English does not select this kind of applicative from the universal inventory of functional heads. See Pylkkänen (2002, 2008) for more details on syntactic and semantic properties of high and low applicatives.

applicative phrases. DOCs cannot appear with intransitive verbs, as the example in (10) shows, because low applicative heads denote a relation between the direct and the indirect object and, thus, the verb must be transitive. Furthermore, since low applicatives entail a transfer of possession relation, they are semantically infelicitous with stative verbs (Pylkkänen 2002, 2008), as shown in (11).

(8) Mary gave you the book. (goal)

(9) Mary baked you a cake. (beneficiary)

(10) *Mary laughed Sue. (intended meaning: Mary made Sue laugh)

(11) *Mary holds Sue the bag. (intended meaning: Mary holds the bag for Sue)

In addition to accounting for differences in meaning between POCs and DOCs and providing a better explanation of why some verbs do not participate in the alternation, the applicative approach allows cross-linguistic analyses of DOCs. Languages select different subtypes of applicatives and this is why different groups of verbs allow DOCs in different languages. Moreover, the applicative approach considers that DOCs always have the same type of structure: low applicatives, but grammatical encoding can vary and make them look different at the surface level (Cuervo 2007). Some of these aspects will be further discussed when the analyses of Spanish and Portuguese DOCs are presented.

Regarding usage, differences in meaning do not seem to be the only factor that determines the choice between POCs and DOCs. Bresnan (2007) argues that the probability of choosing one construction over the other is associated with the verb and its semantic class as well as with the features of the phrase following the verb. After

conducting statistical analysis on English corpora, Bresnan et al (2005) concluded that, in the speaker's choice between POCs and DOCs, given referents precede nongiven referents, pronouns precede nonpronouns, definites precede indefinites and shorter precede longer arguments. In addition, their analysis shows that these variables remain independently significant even when they are conditioned on specific verb senses. In other words, although idioms like "give a headache" or verbs of continuous imparting of force have a strong bias toward the DOC, information structure can override it, like examples in (12) and (13), taken from the World Wide Web by Bresnan et al (2005), show.

(12) From the heads, offal and the accumulation of fishy, slimy matter, a stench or smell is diffused over the ship that would **give a headache to the most athletic constitution.**

(13) Nothing like heart burn food. "I have the tums." Nick joked. **He pulled himself a steaming piece of the pie**. "Thanks for being here."

This means that choosing between POCs and DOCs in English does not derive from meaning alone, but from a combination of variables, including meaning of the verb or the expression, and properties of the recipient and the theme.

## 2.3. The dative alternation in Spanish

Spanish, like English, also has a DP followed by a PP functioning as complements of verbs with two internal arguments, as in (14), which alternates with dative constructions. In the dative construction the dative DP appears more frequently after the theme, is always doubled by a clitic (clitic doubling) and the dative case is marked by the dative case marker "*a*" (15). The co-occurrence of the dative clitic with a

contentful preposition is ungrammatical (16), as well as the absence of the clitic when the indirect object is marked with dative case (17).[6]

(14) Pablo compró un regalo para María.
'Pablo bought a gift for María.'

(15) Pablo **le** compró un regalo **a** María.
Pablo **DAT CL-3s** bought a gift **DAT case marker** María
'Pablo bought María a gift.'

(16) *Pablo le compró un regalo para María.
Pablo DAT CL bought a gift for María

(17) *Pablo compró un regalo a María.
Pablo bought a gift DAT case marker María

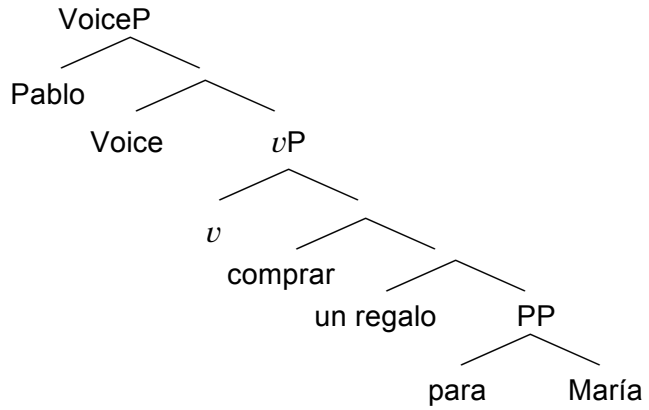
As already mentioned, linguists have been considering that Spanish dative constructions have the same syntactic structure as English DOCs. Demonte (1995), following Larson (1988), as well as Masullo (1992) and Bruhn de Garavito (2000), both following Baker's (1988) incorporation theory, propose analyses that fall within the derivational approach. On the other hand, Cuervo (2003, 2008), adopting Pylkkänen's (2002, 2008) proposal on applicative constructions, argues that datives and POCs correspond to two distinct argument structures not derivationally related.

According to Cuervo (2003), there is no true optionality and each construction has different syntactic and semantic properties. In the POC, the theme object is in the specifier of the PP and asymmetrically c-commands the DP complement of the

[6] Fernández Soriano (1999) argues that when the indirect object is preceded by "*a*" the presence of the clitic is optional when the indirect object is a goal, but it is mandatory when the indirect object has the semantic roles of benefactive, possessor or experiencer. As it will be mentioned later in this section, corpus studies (e.g. Bascuñán 2007) show a different picture.

preposition. Semantically, there is a relation between the theme and the goal through the preposition. For the POC, Cuervo assumes the structure in Figure 2.

*Figure 2: Tree representing the structure of POCs*




Although English and Spanish POCs look exactly the same in their underlying and surface structures, English DOCs and Spanish dative constructions do not look alike. And the differences are not restricted to the spell-out, but are related to the type of applicatives that can be found in each language, as well as to the classes of verbs that allow DOCs, and to the usage of DOCs.

First, although the dative DP is higher than the $DP_{theme}$ in the structure, like the $DP_{recipient}$ in the English DOC, it does not have canonical object properties like the English $DP_{recipient}$ does. The dative DP in Spanish receives dative case, it appears after the direct object and it cannot be passivized.

Second, scholars working within the generative approach claim that in Spanish the dative DP is always doubled by a clitic and when there is no clitic doubling, there is no dative case (Masullo 1992, Demonte 1995, Bruhn de Garavito 2000, Cuervo 2003). Masullo (1992) was the first one to propose that dative case in Spanish is strictly related

to clitic doubling, and he followed Suñer (1988) in interpreting the clitic as a form of object agreement. When the indirect object is not doubled by a clitic there is a PP introduced by a contentful preposition instead of a dative case-marked DP. Masullo had to account for the fact that the clitic seems to be optional with ditransitive predicates whose indirect object has the role of goal, as in (18). He assumes that "*a*" is a dative case marker in (18a) and a contentful preposition in (18b). This means that the preposition "*a*" 'to' differs syntactically, semantically, and morphologically from the "*a*" that introduces dative objects. The morphosyntactic function of the latter is to overtly realize the dative case of the clitic-doubled DP in dative constructions (Masullo 1992, Cuervo 2003).

(18) a. Juan le mandó una carta **a** su madre.
Juan DAT CL sent a letter **DAT case marker** his mother
'Juan sent his mother a letter.'

b. Juan mandó una carta **a** su madre.
Juan sent a letter **to** his mother
'Juan sent a letter to his mother.'

Third, in Spanish DOCs, unlike in English DOCs, assigning dative case to animate entities, as in (19), as much as to inanimate entities, as in (20), is very frequent –as long as the direct object becomes an intrinsic part of the dative DP (Cuervo 2003).[7]

(19) Le pedí un favor a María.
DAT CL (I) asked a favor DAT case marker María
'I asked María a favor.'

[7] Goldberg (1995) shows that the first object in English DOCs can occasionally be inanimate as long as it is understood as the recipient of the direct object:

(iv) The paint job gave the car a higher sale price.

(v) The music lent the party a festive air. (from Goldberg 1995, p.146)

(20) Juan le echó leche a la salsa.
Juan DAT CL put milk DAT case marker the sauce.
'Juan put milk in the sauce.'

Fourth, the dative argument can appear in the context of all types of verbs, including unergative verbs, as in (21), unaccusative verbs, as in (22), and stative verbs, as in (23). Finally, dative arguments can be interpreted not only as goal, as in (21), and benefactive, as in (25), but also as source, as shown in (26), possessor, as in (27), among other semantic roles.[8]

(21) Juan no le habla a Susana.
Juan not DAT CL speaks DAT case marker Susana
'Juan does not speak with Susana'

(22) Se le presentó una oportunidad inesperada a Juan.
REFL CL DAT CL presented an opportunity unexpected DAT case marker Juan
'An expected opportunity presented itself to Juan'

(23) Me debo unas buenas vacaciones en el mar.
DAT CL-1s owe-1s some good holidays in the sea
'I owe myself some good holidays by the sea'

(24) Pablo le regaló una bicicleta a Andreína.
Pablo DAT CL gave a bicycle DAT case marker Andreína
'Pablo gave Andreína a bicycle'

(25) Pablo nos preparó sadwichitos de miga a todos.
Pablo DAT CL-1p fixed tea sandwiches DAT case marker all
'Pablo fixed us all tea sandwiches'

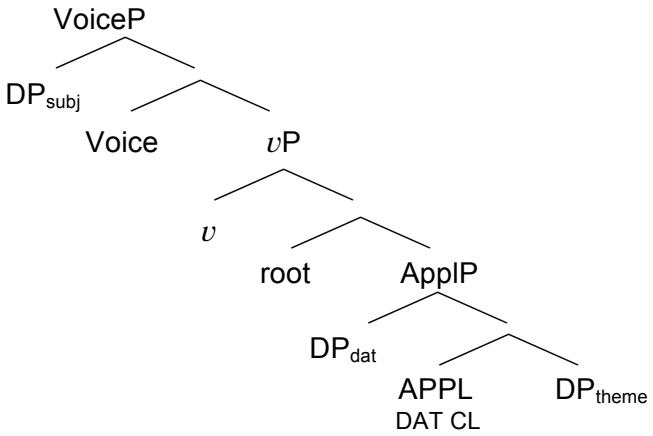
(26) Pablo le robó la bicicleta a Andreína
Pablo DAT CL stole the bicycle DAT case marker Andreína
'Pablo stole the bicycle from Andreína'

[8] The examples are taken from Cuervo (2003) and Masullo (1992). See Masullo (1992) for examples of dative constructions in which the dative DP has other semantic roles.

(27) Pablo le besó la frente a Valeria.
Pablo DAT CL kissed the forehead DAT case marker Valeria
'Pablo kissed Valeria on the forehead'

Regardless of differences in productivity and surface structure, Cuervo (2003), following Pylkkänen's (2002, 2008) applicative typology, proposes that dative arguments in Spanish have structural meaning because they are syntactically and semantically licensed by applicative heads. The first kind of applicative is the low applicative phrase, which has the same structure described for English. As for English DOCs, in Spanish the low applicative phrase also merges below the verb and relates the dative to the direct object independently of the verb. The difference between English and Spanish is that the applicative head in Spanish is not null. Rather, the dative clitic is its morphological spell-out. It occupies the head position and is responsible for licensing the dative DP in its specifier. The structure proposed by Cuervo (2003) is shown in Figure 3.

*Figure 3: Tree representing Low Applicative phrases in Spanish*



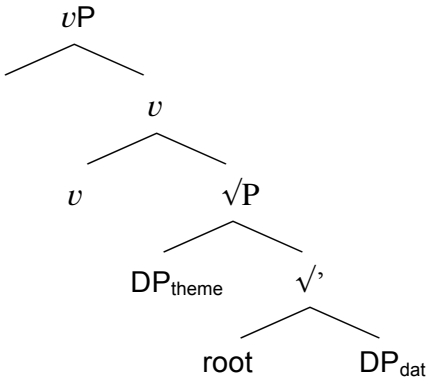

To account for the greater variety of semantic roles that dative arguments can have in Spanish, Cuervo (2003) argues that low applicatives are subdivided into three

kinds instead of two: the two kinds of dynamic low applicatives proposed by Pylkkänen (APPL-TO and APPL-FROM), which entail a real or metaphorical transfer relation, and a static low applicative that relates an individual to the theme object as its possessor. Therefore, the low APPL-TO can combine with recipients (goals + benefactives) and is the same that is found in English DOCs. The low APPL-FROM combines with arguments that express source, and the low APPL-AT combines with possessors.[9]

Pujalte (2008, in press), on the other hand, argues against the idea that all dative constructions have the same syntactic structure (Masullo 1992, Demonte 1995, Cuervo 2003). She claims that datives that are core arguments of verbs have a different syntactic representation than non-core arguments. According to Pujalte, the dative argument of a ditransitive verb is merged with the root, whereas added or non-core datives are introduced by an applicative head, as proposed by Cuervo (2003). Diatransitive verbs usually select indirect objects that have the roles of goal and source and they do not undergo argument alternation or difference in syntactic structure, being the indirect object either realized as a PP or a dative DP in a clitic doubling construction. The structure proposed by Pujalte for sentences with ditransitive verbs is displayed in Figure 4.

[9] According to Cuervo (2003), the dative argument of causative verbs can be represented by an affected applicative phrase and dative subject experiencers and ethical datives can be analyzed as high applicatives. However, because these kind of applicatives are not part of this study they will not be further discussed here.

*Figure 4: Tree representing core dative arguments in Spanish*




Regarding usage and productivity of POCs vs. DOCs in Spanish, Masullo (1992) points out that these alternations are lexically governed to some extent, and because dative constructions have increasingly become more productive and commonly used with a great variety of verbs, in the cases in which the dative construction is possible, the contentful preposition construction may sound odd, stilted, or even ungrammatical. Furthermore, Cuervo (2003) mentions that in most cases of APPL-FROM and in cases of APPL-AT that express inalienable possession, there is no prepositional variant and the DOC is the only possibility; as illustrated in (28) and (29).

(28) a. *Brasil ganó el partido de Argentina.
Brazil won the game from Argentina
'Brazil beat Argentina at the game'

b. Brasil le ganó el partido a Argentina.
Brazil DAT CL won the game DAT case marker Argentina
'Brazil beat Argentina at the game'

(29) a. *Operaron la nariz de Luisa (from Demonte 1995, p.27)
operated the nose of Luisa
'They operated Luisa's nose.'

b. Le operaron la nariz a Luisa
DAT CL operated the nose DAT case marker Luisa
'They operated Luisa's nose.'

In corpus studies, clitic doubling of indirect objects was found to be not only possible but almost categorical in spoken Spanish (e.g. Silva-Corvalán 1984, Bascuñán 2007). Bascuñán (2007) compares the use of clitic doubling vs. a-DPs in different kinds of discourse in Peninsular and American Spanish. She claims that variety (Peninsular vs. American Spanish), register (colloquial vs. formal discourse), animacy (animate vs. inanimate indirect entities), and position (indirect object in preverbal vs. posverbal position) are key factors in determining doubling vs. no doubling. When comparing American Spanish and Peninsular Spanish, she finds that clitic doubling is categorical in spoken colloquial discourse in American Spanish, regardless of the semantic role of the indirect object, and is almost categorical in Peninsular Spanish. Nevertheless, as the degree of formality increases the frequency of clitic doubling decreases in both varieties of Spanish, as illustrated in the examples in (30).[10]

(30) a. Todos los días **le (dative clitic)** dedica unas pocas de horas **al estudio (a-DP)**. (educated speech)
'Every day, (he) devotes a few hours to study'

b. El poeta, al mismo tiempo lúcido y exasperado, desea arrancar su máscara **a la existencia (a-DP)**, para contemplarla en su desnudez. (written essay)
'The poet, in a sort of lucid fury, wants to rip the mask off existence in order to see it as it is.'

Part of Bascuñán's (2007) data from Peninsular Spanish is presented in Table 1 below to illustrate differences in frequency of clitic doubling deppending on register.

[10] The examples are taken from Bascuñán (2007), p.112. The sentence in (30b) is originally from the essay "Todos Santos, Día de Muertos" by Octavio Paz, published in *El laberinto de la soledad*, 1996.

*Table 1: Percentage of clitic doubling vs. a-DPs in different discourses of Peninsular Spanish.*

| | Popular Urban speech | Educated Urban speech | Press interviews | Spanish Constitution (1978) |
|---|---|---|---|---|
| **Clitic Doubling** | 96% | 75% | 68% | 0% |
| **a-DPs** | 4% | 25% | 32% | 100% |

In sum, Spanish dative constructions have the same underlying structure as English DOCs; at least when the indirect object is a non-core argument of the verb. The difference lies in the fact that Spanish selects a greater variety of applicative heads, and datives can be used with a greater variety of verbs and in many more semantic contexts. In addition, DOCs seem to be highly preferred in spoken Spanish over POCs.

## 2.4. Dative alternation in Portuguese

### 2.4.1. European Portuguese (EP)

As previously mentioned, just like in Spanish, dative constructions have a pervasive distribution in EP and dative arguments can have different meanings: goal, as in (31), experiencer, as in (32), benefactive, source, possessor, affected, among others (Torres Morais 2006). The dative argument appears as a DP introduced by the dative case marker "*a*" (a-DP) or as a dative clitic. In addition, the dative DP can be either an animate or an inanimate entity, as illustrated in (33); and the dative construction can appear with transitive activity and stative verbs, as in (34), as well as with unergative verbs, as in (35), and unaccusative verbs, as in the example in (36).[11]

[11] Examples (31) and (32) are from Torres Morais (2006, p.252).

(31) O José enviou uma carta à Maria/
the José sent a letter DAT case marker-the Maria/

enviou-lhe uma carta.
sent- DAT CL-3s a letter
'José sent a letter to Maria/sent her a letter.'

(32) O vinho do Porto agradou aos convidados/agradou-lhes.
the Port wine pleased DAT case marker -the guests/ pleased-DAT CL-3p
'The Port wine pleased the guests

(33) Quando faço limonada ponho-lhe açúcar.
when (I) make lemonade (I) put- DAT CL sugar
'When I prepare lemonade I put sugar in it.'

(34) Invejo- lhe a paciência.
(I) Envy- DAT CL the patience
'I envy his patience.'

(35) Meu filho não me dorme bem.
my son not DAT CL-1p sleep well
'My son doesn't sleep well (on me).'

(36) Chegaram-lhe boas notícias.
arrived- DAT CL good news
'He/She got good news.'

Nevertheless, unlike Spanish, EP is not a canonical clitic doubling language, as the examples in (37) show. The only context in which clitic doubling is found in EP is when the dative case marker "*a*" is followed by a pronominal form. Furthermore, a contrastive focus interpretation arises (Torres Morais & Salles 2010), as illustrated in (38).

(37) a. O Pedro mandou flores à Rosa.
the Pedro sent flowers DAT case marker-the Rosa

b. *O Pedro mandou-lhe flores à Rosa.
the Pedro sent- DAT CL-3s flowers DAT case marker-the Rosa

'Pedro sent flowers to Rosa.'

(38) O Pedro mandou-lhe flores a ela. (meaning: não a ele)
the Pedro sent- DAT CL flowers DAT case marker she
'Pedro sent her flowers. (meaning: not him)

Hence, in EP, although "*a*" seldom appears in clitic doubling constructions, it is ambiguous between a contentful preposition with locative and directional meaning, as in (39), and a dative case marker, as exemplified in (40) (Torres Morais & Berlinck 2006).

(39) O José reagiu a ele (from Torres Morais & Berlinck 2006, p.83)
the José reacted to him
'José reacted to him.'

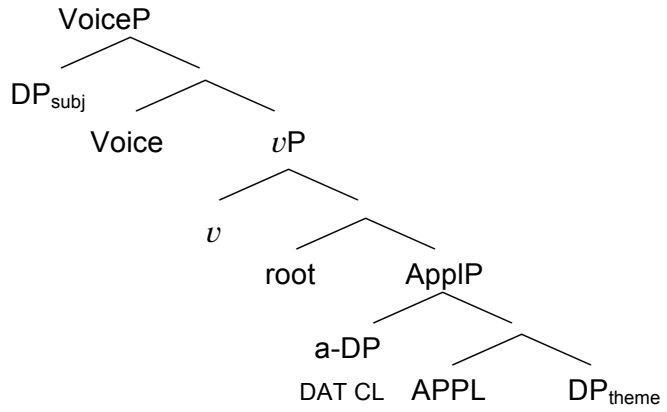
(40) Dei o libro a Maria.
(I) gave the book DAT case marker Maria
'I gave Maria the book.'

To account for the fact that a lexical DP cannot be doubled by a clitic and a-DPs and dative clitics are in complementary distribution in EP, Torres Morais (2007) and Torres Morais and Berlink (2007) propose that in EP dative clitics are not the spell-out of the applicative head, like in Spanish. Rather, they are introduced as arguments in the specifier position of the applicative phrase. Because within the Romance languages clitic doubling is obligatory in some cases but not in others, the authors argue that Romance clitics must be distinguished between clitics that have an argument status and clitics that have a head-agreement status. A differentiation such as this seems not only to better account for cross-linguistic differences within the Romance languages,[12] but

[12] French and Italian do not have clitic doubling either (e.g. Anagnostopoulou 2005 among others).

also to the syntactic representation of non-doubled dative clitics.[13] The structure prosed by Torres Morais and Berlinck (2007) appears in Figure 5 below.

*Figure 5: Tree representing the structure of low applicative phases in EP*




### 2.4.2. Brazilian Portuguese (BP)

BP, like Spanish and EP, has dative constructions. However, clitic doubling is already completely absent from the paradigm and 3rd person dative clitics (*lhe*/*lhes*), although not completely absent from the paradigm,[14] are being progressively confined to written and formal discourse (Galves et al. 2005), as shown in (41). Constructions with a preposition introducing either a lexical DP or a strong pronoun have been replacing dative constructions in the colloquial variety of the language, as illustrated in (42). On the other hand, 1st and 2nd person dative clitics are still quite productive in both formal and colloquial registers, as in (43) and (44).

[13] For Spanish, it is assumed that when the dative clitic appears alone, a null pronoun (pro) occupies the argument position (c.f. Suñer 1988). However, the clitic alone is much more frequent than the doubled construction and 1st and 2nd person clitics seldom double an a-DP, as corpus studies show (Weissenrieder 1995, Colantoni 2002, Belloro 2007).

[14] In some varieties of BP, the pronoun *lhe* is used as a 2nd person accusative clitic in the colloquial discourse (cf. Araújo Ramos 1992, Monteiro 1994, Brito 2001)

(41) O Paulo **lhe** deu um presente. (formal BP)
the Paulo **DAT CL-3s** gave a gift
'Paulo gave her/him a gift.'

(42) O Paulo deu um presente para a Maria/ela. (colloquial BP)
the Paulo gave a gift to the Maria/her
Paulo gave a gift to Maria/her.

(43) O Paulo **me** deu um presente. (formal and colloquial BP)
the Paulo **DAT CL-1s** gave a gift
'Paulo gave me a gift.'

(44) O Paulo **te** deu um presente. (formal and colloquial BP)
the Paulo **DAT CL-2s** gave a gift
'Paulo gave you a gift.'

Galves, Torres Morais, Ribeiro and Kato (2005) compare the original text of Paulo Coelho's novel *The Alchemist*, which was first published in Brazil, and the adapted version of the Portuguese edition. They found that null dative arguments, as in (45), and PPs with the prepositions "*a*" 'to' or *para* 'for' followed by a strong pronoun, as in (46), are frequent strategies used in colloquial written discourse to avoid dative clitics in BP.[15]

(45) a. Um certo amigo tinha indicado ∅ a loja… (BP)
'A certain friend had referred him to the store…'

b. Um certo amigo tinha-lhe indicado a loja… (EP)
a certain friend had- DAT CL referred the store
'A certain friend had referred him to the store…'

[15] Sentences in (45a) and (46a) are from the Brazilian edition and sentences in (45b) and (46b) are from the Portuguese edition of the novel *O Alquimista*, written by Paulo Coelho. The referent of the null object in (45a) can only be inferred from the previous context in the original text of the novel or when (45a) is compared to (45b). This is why 'him' could be included in the gloss of (45a).

(46) a. Vamos, pergunta a ela! (BP)
'Come on, ask her!'

b. Vamos, pergunta-lhe! (EP)
come on ask DAT CL
'Come on, ask her!'

This process is related to changes in the BP clitic system. Cyrino (1993) reports that changes in the clitic system and in object expression in BP started to take place in the 19th century: null objects and strong pronouns started to occupy the object position and clitics became less frequent. Berlinck (1997) studied differences related to register and person in the use of clitic pronouns in BP. She analyzed the colloquial speech of young people from Curitiba (a city in the Southern region of Brazil) and found a high incidence of null indirect objects across all persons and a rate as low as 1% of 3rd person dative clitics. Her results are summarized in Table 2 below.

*Table 2: Percentages of each type of indirect object in the colloquial speech of young people from Curitiba (table adapted from Berlinck 1997)*

| | Null dative | Dative Clitic | PP |
|---|---|---|---|
| 1st person | 60% | 32.5% | 7.5% |
| 2nd person | 33% | 52% | 15% |
| 3rd person | 76% | 1% | 23% |

Freire (2005) also analyzed the use of dative constructions by BP native speakers and found that the frequency of dative clitics in discourse is related to degree of literacy and level of education of the speaker. He concludes that clitic pronouns are acquired through schooling and, thus, they will appear more often in formal written discourse.

When comparing the speech of BP speakers and EP speakers, Freire (2000) found a very different pattern in these two varieties of Portuguese. Regarding

specifically 3rd person datives, his data showed that only BP speakers use the preposition followed by a strong pronoun, as in (47), and only EP speakers use the dative clitic, as in (48).

(47) A Maria entregou o livro para ele. (BP)
the Maria gave the book to he
'Maria gave the book to him'

(48) A Maria entregou-lhe o livro. (EP)
the Maria gave- DAT CL-3s the book
'Maria gave the book to him'

Freire's (2000) data is summarized in Table 3.

*Table 3: Percentages of each type of indirect objects in the speech of educated speakers of BP and EP*

| | Null dative | Dative clitic | prep + strong pronoun | prep + DP |
|---|---|---|---|---|
| BP | 36% | 0% | 57% | 7% |
| EP | 9% | 88% | 0% | 3% |

Both Berlinck (1997) and Freire (2000) found that percentages of 3rd person dative clitics were much lower than those of 1st and 2nd person clitics in the speech of educated speakers of BP. This means that whereas 3rd person dative clitics have been almost entirely replaced by null objects and PPs, 1st and 2nd person dative clitics are still productive. It has been recognized by many scholars that there is an essential difference between 1st and 2nd person on the one hand, and 3rd person on the other (e.g. Forchheimer 1953, Benveniste 1971). Whereas 1st and 2nd person pronouns have person features, 3rd person pronouns do not, which indicates that the 3rd person is unmarked relative to 1st and 2nd person. This is because reference to the 1st and 2nd person pronouns is actualized in the course of discourse whereas the reference of the 3rd person pronoun is fixed. The fact that the 3rd person is a non-person might be one of

the reasons why 3rd person dative clitics were more vulnerable to the process of reduction of the BP pronominal system than 1st and 2nd person dative clitics.

Although 3rd person clitics were more affected by the process of change in the BP pronominal system, as Berlinck's (1997) results show, it has also affected 1st and 2nd person clitics. Despite the productivity of 1st and 2nd person singular dative clitics in all types of BP discourse, the counterparts with a preposition followed by a strong pronoun, as in (49) and (50), are often heard as well. In the case of 2nd person indirect objects, the preposition followed by the strong pronoun *você* 'you' was found to be the preferred option when compared to the dative clitic *te* (Oliveira e Silva 1977), as in (50). Omena (1996) also found that 1st person plural indirect objects are frequently expressed by the preposition followed by the form *a gente*, instead of the 1st person plural clitic *nos*, as illustrated in (51).

(49) O Paulo deu um presente para mim.
'Paulo gave a gift to me.'

(50) O Paulo deu um presente para você.
'Paulo gave a gift to you.'

(51) O Paulo deu o livro para a gente.
'Paulo gave the book to us.'

This means that the indirect object in BP can be expressed with dative clitics, PPs and it can also be null. The proportion of each type of object is constrained at least by person (1st and 2nd vs. 3rd) and register (colloquial vs. formal).

Another difference between EP and BP is the absence of clitic doubling and the dative case marker "*a*" in the BP variety (Torres Morais & Berlinck 2007, Silva 2007, Torres Morais & Salles 2010). Even when "*a*" is not a case marker but a real preposition,

BP native speakers from different regions prefer the preposition *para* to introduce an indirect object with a verb that entails movement or transfer of possession (Berlinck 1997, Torres Morais & Berlinck 2006).[16] Torres Morais and Berlinck (2006), in a diachronic study, show that the use of "*a*" starts to decline in the beginning of the 20th century.

For Torres Morais and Salles (2010), the absence of a dative case marker along with the decrease in the use of dative clitics constitute evidence for the loss of the low applicative construction with transitive verbs in BP. Therefore, the mechanisms of projecting indirect objects as PPs become the preferred option by BP native speakers. Based on these syntactic aspects of BP, Torres Morais and Salles (2010) also argue that BP lost the possibility to use dative constructions with applied arguments that have the semantic roles of possessor, as in (52), source, as in (53), or affected, as in (54). The authors do not make any reference to goal or benefactive datives and whether they have been lost in BP. Moreover, an alternative structure to represent 1st and 2nd person datives is absent of their analysis and it is not clear what the syntactic representation of these constructions would be when assuming that BP has lost applicative phrases entirely.

(52) *A Maria me/ lhe cortou o cabelo.
the Maria DAT CL-1s/DAT CL-3s cut the hair
'Maria cut my/his hair.'

[16] Speakers from states that are more in the south of Brazil, such as Paraná or Rio de Janeiro prefer to use *para* more than 80% of the time (Berlinck 1997, Gomes 2003), whereas speakers from states at the Northeastern region of Brazil, such as Ceará, use *a* up to 33% of the time (Salles & Scherre 2003).

(53) *A Maria nos/ lhes alugou o apartamento.
the Maria DAT CL-1p/DAT CL-3p rented the apartment
'Maria rented the apartment from us/them.'

(54) *A Maria te/ lhe quebrou os óculos.
the Maria DAT CL-2s/DAT CL-3s broke the glasses
'Maria broke your/her glasses.'

Regarding more specifically the expression of possession in BP, Kliffer (2002) analyzes inalienable possession in three corpora: two novels and a set of interviews with semi-literate subjects. He finds a drift from expressing possession through a dative-clitic construction in the most formal register to a nearly clitic-free situation at the colloquial extreme. Furthermore, when Kliffer asked three university-educated informants to judge pairs of sentences as the ones presented in (55), all three failed to find any semantic difference between the sentences, but were unanimous in pointing out a register contrast. This means that semantic differences between POCs and DOCs found in EP, Spanish and English are probably being lost in BP as well.

(55) a. Francisco me torceu o braço. (from Kiffler 2002, p.132)
Francisco DAT CL-1s twisted the arm
'Francisco twisted my arm.'

b. Francisco torceu meu braço.
Francisco twisted my arm
'Francisco twisted my arm.'

What Kliffer observes for the expression of possession in BP is also happening with arguments that fall within the semantic category of benefactive. DOCs are rarely used with verbs that accept this kind of arguments. Nevertheless, 1st or 2nd person dative clitics seem to be quite frequent with arguments that have the semantic role of

goal, as in (56), and are also heard with source arguments, as in (57).[17] That is, dative clitics seem to be the preferred option only for 1st and 2nd person arguments, and when the indirect object is part of the argument structure of the verb. Thus, when the verb does not subcategorize two internal arguments, dative clitics start to sound formal and odd. In addition, the use and acceptability of dative constructions in BP seem to depend quite significantly on idiosyncratic properties and frequency of use of the verb.[18] For instance, verbs like *comprar* 'buy', *fazer* 'make' sound good with 1st and 2nd person dative clitics, although their indirect objects are benefactives, as illustrated in (58).

(56) O Paulo me deu uma bicicleta.
the Paulo DAT CL-1s gave a bicycle
'Paulo gave me a bicycle'

(57) O comportamento do meu filho me tira o sono.
the behavior of-the my son DAT CL-1s take the sleep
'My son's behavior is keeping me awake.'

(58) a. Teus amigos te compraram um presente.
your friends DAT CL-2s bought a present
'Your friends bought you a present.'

b. Meu namorado me fez uma surpresa.
my boyfriend DAT CL-1s made a surprise
'My boyfriend made me a surprise.'

Finally, as in English, DOCs are ungrammatical with unergative verbs, as in (59) and with unaccusative verbs, as in (60); even in formal register.

[17] Although Torres Morais and Salles (2010) claim that BP has lost source datives, 1st and 2nd person datives are productive and common with verbs like *roubar* 'to steal', *tirar* 'to take', *exigir* 'to demand', and are the only possibility with *economizar* 'to save', for example.

[18] Although I acknowledge that the use of DOCs or POCs is related to semantic and idiosyncratic properties of the verbs, these differences will not be specifically analyzed in this study. This analysis will focus mainly on semantic properties of the indirect object, which are related to the syntactic representation of the sentence, as discussed above.

(59) *O João não me fala.[19]
the João not DAT CL-1s speaks
'João does not speak to me'

(60) *Te chegaram dois presentes pelo correio.
DAT CL-2s arrived two gifts by-the mail
'Two gifts arrived by mail for you'

In sum, BP appears to be moving away from dative constructions, and it looks like arguments that have the role of benefactive and possessor are the ones that have been more affected by these changes. Furthermore, it seems that in colloquial discourse 3rd person POCs and null indirect objects completely took over with the restriction of the 3rd person dative clitics *lhe*/*lhes* to very formal contexts. Nevertheless, what remains to be presented is an analysis that can explain what specific predicates allow dative constructions in BP and why. In addition, it is necessary to propose a structure that can represent 1st and 2nd person datives, which are not only grammatical but seem to be the preferred option with some kinds of predicates.

To contribute to a better understanding of dative alternation in BP, I conducted two experimental studies involving two different groups of BP native speakers. The methodological procedures, the participants and the results of the two studies will be presented and discussed in Chapter 3.

[19] *Falar* 'to speak' has a transitive use in BP as well, and this sentence is grammatical if we assume that it has a null direct object that the hearer can recover from the context.

# Chapter 3:

# Experimental investigation of the dative alternation in BP

## 3.1. Introduction

In Chapter 2 I described properties of the dative alternation in English, Spanish and Portuguese. In the present Chapter, the two studies conducted with BP native speakers will be presented and an analysis of the dative alternation in BP will be proposed.

As stated in Chapter 2, after Marantz (1984) described the syntax of applicative constructions, DOCs were considered to be part of the grammar of a variety of languages, including Romance languages. Therefore, a V DP DP construction in English, as in (61), as well as a dative construction in Spanish, as in (62), or in Portuguese, as in (63), can all be viewed as DOCs with the same underlying structure; although they look very different on the surface.

(61) Mary sent her mother a letter.

(62) Pablo le compró un regalo a María.
Pablo DAT CL-3s bought a gift DAT case marker María
'Pablo bought María a gift.'

(63) O Paulo me deu um presente.
the Paulo DAT CL-1s gave a gift
'Paulo gave me a gift.'

According to Pylkkänen (2002, 2008) and Cuervo (2003), the indirect object in these constructions –which is marked with dative case in languages like Spanish and Portuguese among many others– is a non-core argument added to the argument

structure of the verb and licensed syntactically and semantically by an applicative head. English has only the low APPL-TO (which selects applied arguments that have the semantic roles of goal and benefactive) (Pylkkänen 2002, 2008). Spanish has the low APPL-TO, the low APPL-FROM (which combines with applied argument that express source), and the low APPL-AT (which selects applied arguments that have a possession relation with the direct object) (Cuervo 2003). Against a uniform analysis of the indirect object in dative constructions, Pujalte (2008, in press) argues that there are two kinds of datives: argumental and non-argumental datives. Only the second ones are added to the argument structure of the verb and are introduced by an applicative head. The dative arguments of ditransitive verbs, on the other hand, are directly associated to the root.

In BP, clitic doubling is already completely ungrammatical and 3rd person dative clitics *lhe/lhes* are being gradually lost and are currently confined to written formal discourse (Galves et al. 2005). Therefore, POCs or null datives are always preferred in spoken BP with 3rd person arguments (Berlinck 1997). Dative clitics seem to be more frequent than POCs exclusively with 1st and 2nd person singular arguments that have the role of goal. As discussed in Chapter 2, there are very few studies on dative constructions in BP and it is still unclear whether BP has applicative constructions and what is the morphosyntactic status of dative clitics that are still frequently used. In order to investigate what kinds of predicates still allow dative constructions in BP and what the differences between 1st and 2nd person vs. 3rd person arguments are, I conducted two experimental studies. In Study 1 BP native speakers completed a written acceptability judgment task (AJT) and in Study 2 they completed a shorter written AJT and a picture

description task. Controlled experimental methodologies used in both studies allowed balancing different semantic and syntactic conditions and combining a written test of acceptability with a test of oral production to capture differences between written and oral discourse.

The main research question that motivated both studies are:

1) What kind of predicates still allow dative constructions in BP and why?
2) What is the status of a+DPs[20] in the Portuguese spoken in Brazil? Are they dative constructions, as in EP, or PPs?
3) What is the morphosyntactic status of the dative clitics that are still productively used in BP?

I hypothesize, in the same line as Torres Morais (2006) and Torres Morais and Berlink (2006), that BP is gradually losing the possibility to use dative clitics to express indirect objects. Third person dative clitics are already confined to formal written discourse. POCs are the preferred option with all kinds of arguments, except with 1st and 2nd person indirect objects with the role of goal. In addition, the dative case marker "*a*" is already absent from the Portuguese spoken in Brazil and an *a*+DP has to be interpreted as a PP.

[20] Because a-DP is an abbreviation that I am using to refer to DPs that are marked with dative case by the dative case marker "*a*" and the status of "*a*" as either a contentful preposition or a dative case marker in BP is part of this study's goal, the DP preceded by "*a*" in BP will be referred to as a+DP.

## 3.2. Study 1

The purpose of this study was to investigate which syntactic constructions (POC and/or DOC) are accepted by BP native speakers when the role and the person of the indirect object vary. I included four types of roles (goal, source, benefactive and possessor, and two persons (1st and 3rd).[21] In addition, this study looks at whether the acceptability of a+DPs patterns with the acceptability of dative clitics to further investigate the syntactic status of a+DPs.

Based on the description of the phenomenon presented in Chapter 2, I predicted that BP native speakers would rate 1st person datives higher than 3rd person datives. Datives that are core arguments of the verb would also be rated higher than the datives that are non-core arguments. Nevertheless, because the sentences in the AJT were presented in writing, which is more related to formal register, BP native speakers might still accept 3rd person dative clitics and non-core arguments expressed by a dative clitic. Moreover, I predicted that the acceptability of a+DPs would not pattern with the acceptability of dative clitics, indicating that "*a*" is a contentful preposition in BP. Finally, POCs would be highly accepted in all semantic contexts.

### 3.2.1. Participants

The participants in this study were 15 undergraduate students and 4 instructors at the Federal University of São Carlos, all born and raised in the Southeastern Region

[21] Second person was not included in the present study because its behavior is similar to that of 1st person. Moreover, adding 2nd person indirect objects would increase tremendously the length of the task.

of Brazil. They all reported speaking Portuguese at home and at school during childhood. Their mean age was 24 (age range: 18–37) In fact, a total of 21 participants completed the task but two of them were excluded from the analyses because they were born and raised in Minas Gerais, a state that belongs to the Central Region of Brazil, where there are dialects that have English type DOCs.[22]

### 3.2.2. Task

A written AJT was used to elicit BP native speakers' intuitions about POCs and DOCs when the indirect object has different semantic roles. The AJT had a 4x3x2 design and included arguments with four different semantic roles: goal, source, benefactive and possessor; which appeared in three different phrase types: dative clitics, PPs and a+DPs; and in two different persons: 1st and 3rd. The AJT consisted of a total of 140 written sentences: 96 target items and 44 fillers.[23] Fillers were used as distractors and to balance the number of grammatical and ungrammatical sentences in the test. Target items were divided in 24 different categories according to semantic value of the argument, type of syntactic phrase and person, as shown in Table 4.

*Table 4: Categories of the long AJT*

| **Goal** | | | | | | **Source** | | | | | | **Benefactive** | | | | | | **Possession** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PP | | Dative clitic | | a+DP | | PP | | Dative clitic | | a+DP | | PP | | Dative clitic | | a+DP | | PP | | Dative clitic | | a+DP | |
| 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd |

[22] For further information on English-type DOCs in dialects of the Central Region of Brazil, see Salles (1997), Salles and Scherre (2003) and Torres Morais and Salles (2010).

[23] Eighteen target items that belonged to the semantic categories of source and possessor were eliminated form the analysis. See further explanation in notes 24 and 25.

There were four test items in each of the goal and the benefactive categories, three items in each of the source categories and two items in each of the possessor categories. All the items started by presenting a context and ended with a verb and the arguments: the direct object and the indirect object. For instance, in (65) the verb *mandar* 'send' is followed by the direct object *uma carta* 'a letter', which is then followed by the indirect object *para a mãe dela* 'to her mother'. The indirect object received the semantic roles of goal, source, benefactive or possessor and was expressed by a PP, as illustrated in (64) and (65), an anaphoric dative clitic, as in (66) and (67), or an a+DP, as in (68) and (69). One test item of each category that has indirect objects with the meaning of goal is presented below. The parts of the sentences that contain the target structure are bolded for easy visualization (see Appendix A for the full list of test sentences).

(64) Goal/PP/1st person (grammatical)

Faz anos que o Luis mora fora do país e nunca **mandou sequer um email para mim**.
Luis has been living abroad for years and never **sent even an email to me**

(65) Goal/PP/3rd person (grammatical)

Faz muitos anos que a Marina mora na Europa e nunca **mandou uma carta para a mãe**
Marina's been living in Europe for many years and never **sent a letter to the mother dela**.
**of-her** ('...**sent a letter to her mother**.')

(66) Goal/dative clitic/1st person (grammatical)

Faz anos que o Luis mora fora do país e nunca **me mandou um email sequer.**
Luis has been living abroad for years and never **DAT CL-1s sent an email even** ('... **sent me an email.**')

(67) Goal/dative clitic/3rd person (grammatical but used only in formal contexts)

A mãe da Marina está sempre muito triste porque faz anos que a filha mora na Europa
Marina's mother is always very sad because her daughter's been living in Europe for a long time

e nunca **lhe** **mandou uma carta**.
and never **DAT CL-3s sent a letter** ('... **sent her a letter**.')

(68) Goal/a+DP/1st person (ungrammatical)

*Faz anos que o Luis mora fora do país e nunca **mandou sequer um e-mail a** **mim**.
Luis has been living abroad for years and never **sent even an email DAT marker me**
('... **sent me an email.**')

(69) Goal/a+DP/3rd person (grammatical but used more in formal contexts)

Faz muitos anos que a Marina mora na Europa e nunca **mandou uma carta**
Marina's been living in Europe for many years and never **sent a letter**

**à** **mãe** **dela**.
**DAT marker-the mother of-her** ('... **sent her mother an email.**')

Because it is not possible to include an example of each of the 24 categories, Table 5 shows the verbs used in each semantic context.

*Table 5: List of verbs used in each semantic context of the long AJT*

| Goal | Source | Benefactive | Possession |
|---|---|---|---|
| *contar* 'tell' | *exigir* 'demand' | *comprar* 'buy' | *cortar* 'cut' |
| *trazer* 'bring' | *tirar* 'take away' | *fazer* 'make' | *lavar* 'wash'[25] |
| *mandar* 'send' | *roubar* 'steal'[24] | *preparar* 'prepare, fix' | |
| *entregar* 'hand' | | *ler* 'read' | |

In the instructions of the test, participants were told to use their linguistic intuitions to answer the test and to judge the sentences based on everyday use of Portuguese rather than on prescriptive rules. These instructions were intended to

[24] Sentences with the verb comprar 'buy' were eliminated from the analysis because this verb only allows a construction with dative clitics when the indirect object has the role of benefactive.

[25] The other two verbs used in this category were eliminated from the analysis because they cannot be represented by a low-at applicative phrase.

prevent them from using exclusively their knowledge of the formal register when judging the sentences. They were also instructed to use the following four-point scale, including a 'don't know' option, to judge each sentence.

1 = *completamente impossível* 'completely impossible'
2 = *provavelmente impossível* 'probably impossible'
3 = *provavelmente possível* 'probably possible'
4 = *perfeitamente possível* 'perfectly possible'
*não sei* 'don't know'

The sentences were presented in written format and the test was administered on paper to all subjects at once in a classroom setting. The experimenter gave the subjects oral instructions about the test, which were very similar in content to the instructions they had to read before completing the test. They were told they had as much time as they needed to complete the test. Although some participants took longer than others, the total time of testing did not exceed one hour. Besides completing the test, the participants were asked to answer a very brief demographic questionnaire, which included questions about their age, native language, place of origin, degree of schooling and occupation. This information was presented in Section 3.2.1.

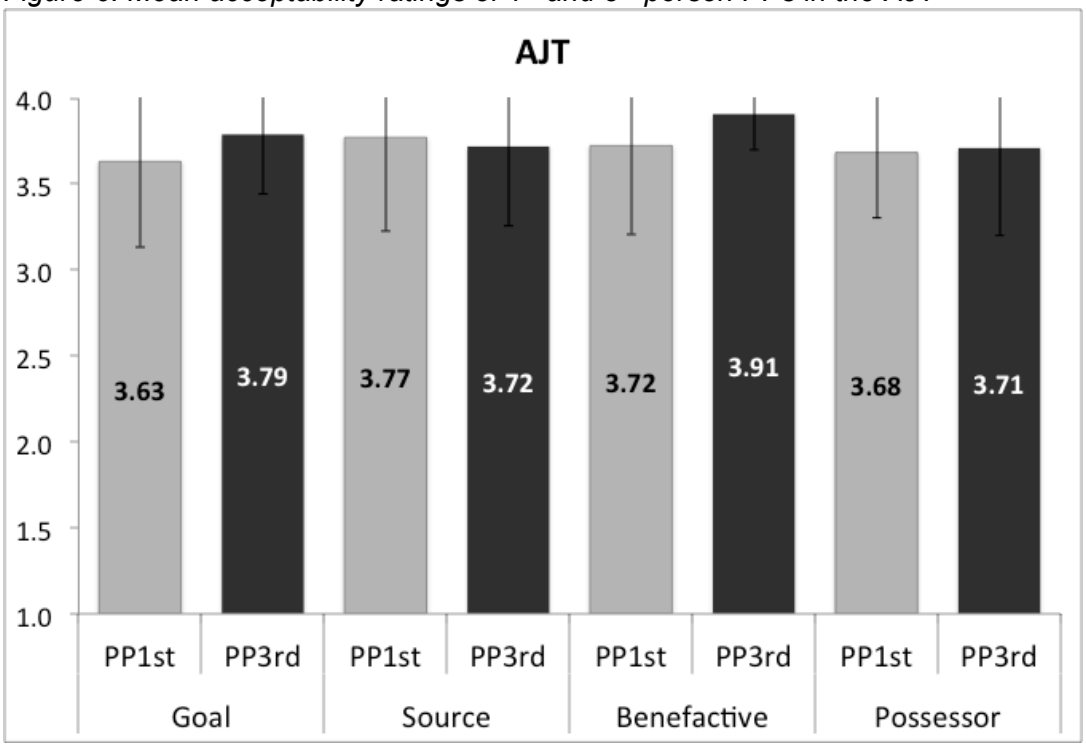
### 3.2.3. Results and brief discussion

To determine whether BP native speakers accept POCs and/or DOC when the indirect object has different semantic roles (goal, source, benefactive and possessor), and whether acceptability of DOCs is restricted by person (1st vs. 3rd person), the mean acceptability ratings of PPs and dative clitics were submitted to statistical analyses.

The BP native speakers highly accepted 1st and 3rd person PPs. In all semantic categories mean acceptability ratings were above 3.5 in the 1-4 point scale. Mean acceptability ratings of dative clitics were above 3 for all semantic categories; however, when compared to the ratings given to 1st and 3rd person PPs, dative clitics' ratings showed greater variation, and means were above 3.5 only when the indirect object had the semantic roles of goal and source.

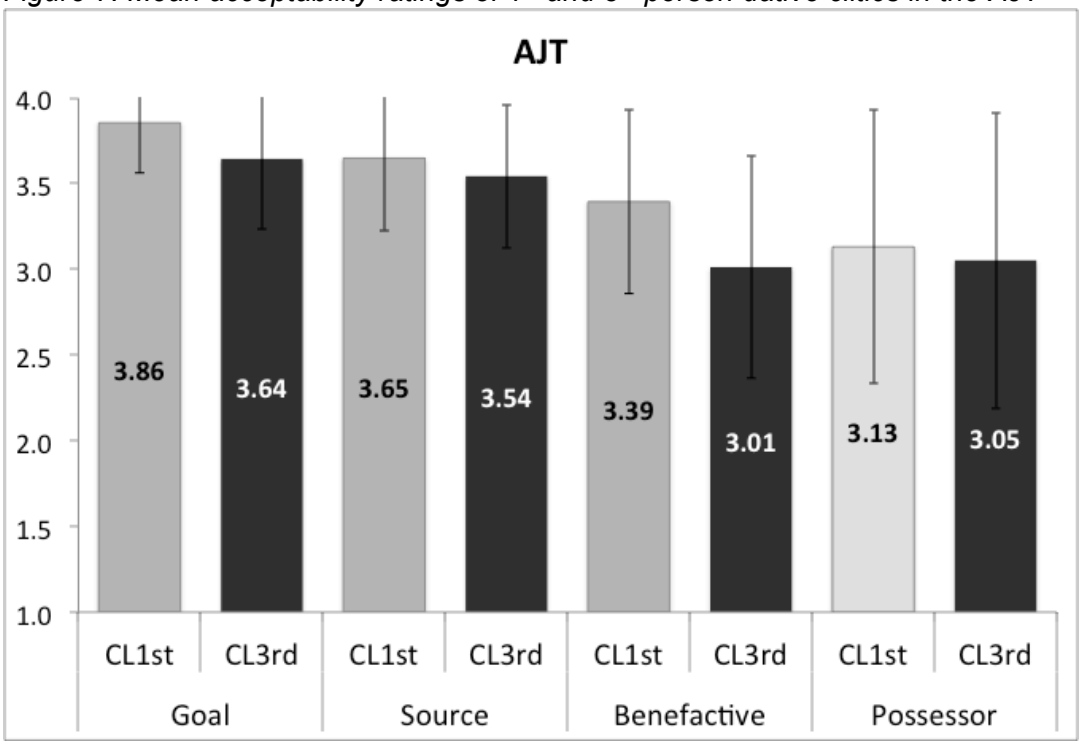
Figure 6 shows mean acceptability ratings of PPs and Figure 7 shows mean acceptability ratings of dative clitics.

*Figure 6: Mean acceptability ratings of 1st and 3rd person PPs in the AJT*




Notes: PP1st: 1st person PP, PP3rd: 3rd person PP

*Figure 7: Mean acceptability ratings of 1st and 3rd person dative clitics in the AJT*




Notes: CL1st: 1st person dative clitic, CL3rd: 3rd person dative clitic

A repeated-measures ANOVA was conducted on the results of the AJT, with semantic role (goal, source, benefactive and possessor), phrase type (PP and dative clitic)[26] and person (1st and 3rd person) as the within-subjects variables. Mauchly's test indicated that the assumption of sphericity was violated for the main effect of semantic role $\chi^2(5) = 13.36$, $p < .05$. Therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = .74$). There was a significant main effect of semantic role, $F(2.23,40.19) = 8.98$, $p < .05$, and phrase type, $F(1, 18) = 15.28$, $p < .05$, but no significant main effect of person, $F(1,18) = 0.9$, $p = .35$. Contrasts indicated that goal arguments received acceptability ratings significantly higher than benefactive, $F(1,18) = 13.51$, $p < .05$, and possessor arguments, $F(1,18) = 17.16$,

[26] In these statistical analyses only PPs and dative clitics were included due to the uncertain status of a+DPs.

$p < .05$, but not significantly higher than source arguments $F(1,18) = 2.02$, $p = .17$. Pairwise comparisons using a Bonferroni adjustment confirmed the results of the contrasts. They also indicated that the differences between acceptability of source and benefactive arguments, and benefactive and possessor arguments were not significant ($p > .05$), whereas the difference between source and possessor arguments was significant ($p < .05$).

There was a significant interaction between semantic role and phrase type, $F(3,54) = 11.54$, $p < .05$. The source of this interaction can be explained by the fact that while PPs received high ratings with all semantic roles, acceptability ratings of dative clitics varied depending on the semantic role of the argument. To break down this interaction, contrasts were performed comparing the other three semantic roles with goal, and PPs with dative clitics. Results revealed a significant interaction when goal arguments were compared to benefactive and possessor arguments varying the phrase type, but there was no interaction in the contrast between goal and source arguments when varying the phrase type. The results of these contrasts are summarized in Table 6.

*Table 6: Results of contrasts on the interaction between semantic role and phrase type*

| Semantic role | Phrase type | Results |
|---|---|---|
| goal vs source | PP vs dative clitic | $F(1,18) = 2.62$, $p = .12$ |
| goal vs benefactive | PP vs dative clitic | $F(1,18) = 29.09$, $p < .05$ |
| goal vs possessor | PP vs dative clitic | $F(1,18) = 15.67$, $p < .05$ |

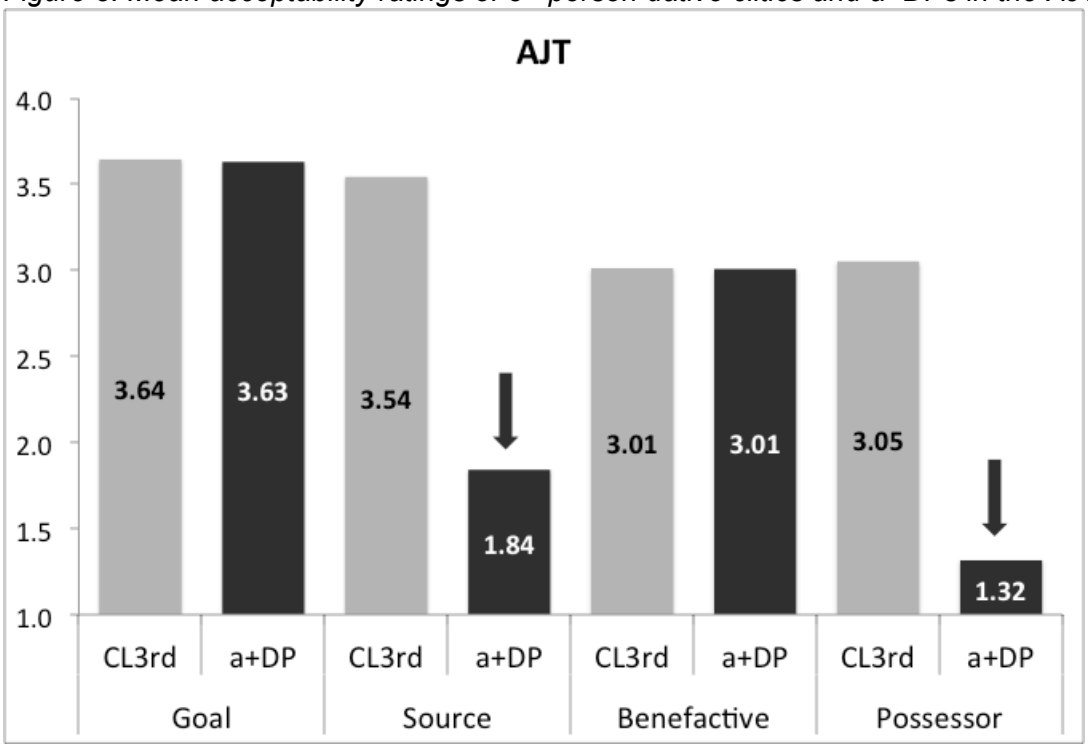
Two separate repeated-measures ANOVA on the results of the AJT were also conducted: one to examine the effect of semantic role on the acceptability of PPs and another one to examine the effect of semantic role on the acceptability of dative clitics. The first ANOVA showed that PPs were not rated differently when the semantic role

varied, $F(3,54) = 1.08$, $p = .36$. However, in the second ANOVA, there was a main effect of semantic role on the acceptability of dative clitics, $F(3,54) = 13.44$, $p < .05$. Contrasts showed that goal datives were rated significantly higher than benefactive datives, $F(1,18) = 23.11$, $p < .05$, and possessor datives, $F(1,18) = 21.95$, $p < .05$. Difference between goal datives and source datives was only marginally significant, $F(1,18) = 4.66$, $p = .045$.

To summarize, statistical analyses on the results of the AJT revealed that goal datives were rated significantly higher than benefactive and possessor datives but not significantly higher than source datives, and PPs were rated consistently higher than dative clitics. In addition, against my predictions there was no significant difference between the ratings of 1st and 3rd person dative clitics.

In order to look at whether a+DPs are dative constructions or prepositional constructions in BP, the acceptability ratings of 3rd person dative clitics and a+DPs were compared. Figure 8 shows that mean acceptability ratings of 3rd person a+DPs and dative clitics were above 3 and were almost identical when the semantic role of the argument is goal and benefactive. However, when the argument was a source or a possessor, mean acceptability ratings of 3rd person a+DPs were below 2, whereas mean acceptability ratings of 3rd person dative clitics were above 3. That is, a+DPs were accepted only when the indirect object had the roles of goal and benefactive, which does not coincide with the acceptability of dative clitics.

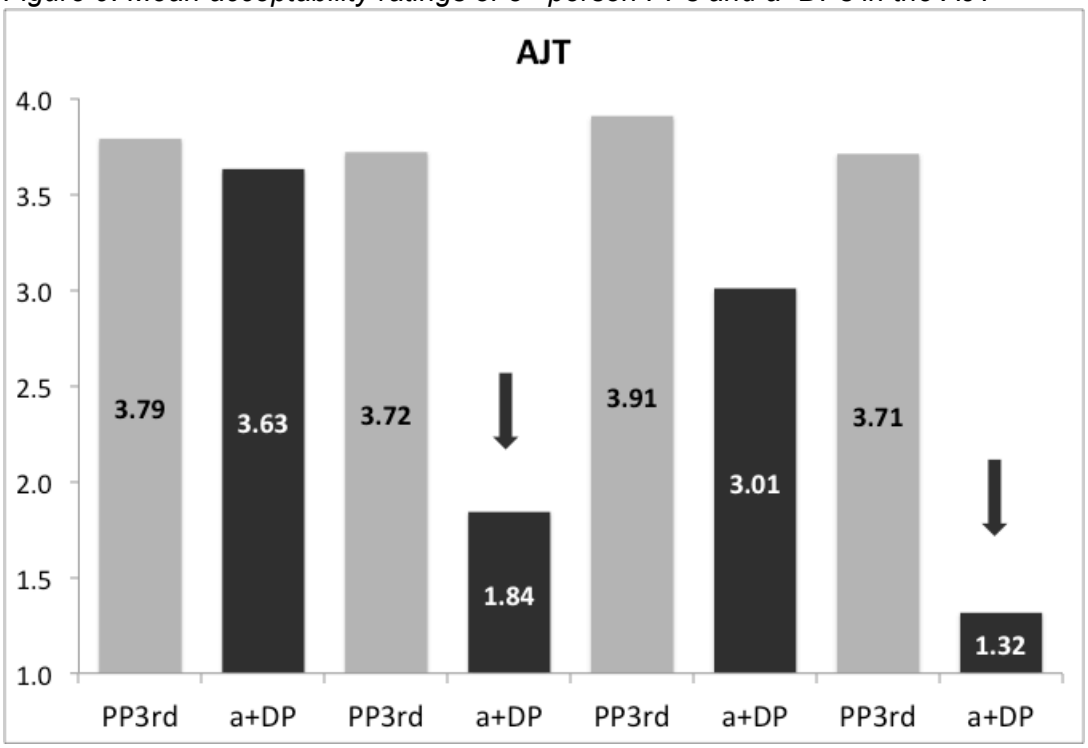
*Figure 8: Mean acceptability ratings of 3rd person dative clitics and a+DPs in the AJT*




Notes: CL3rd: 3rd person dative clitic, a+DP: DP preceded by "a"

The acceptability ratings of 3rd person a+DPs were also compared to those of 3rd person PPs with all kinds of indirect objects. Indirect objects preceded by "*a*" received acceptability ratings more similar to those of PPs with goal and benefactive indirect objects. Although a+DPs are still acceptable with benefactive indirect objects, the mean acceptability rating is still lower when compared to the mean acceptability rating of the sentences with *para* 'for'. This is because the preposition *para* is the preferred option with this kind of indirect objects. On the other hand, when the mean acceptability ratings of a+DPs is compared to those of PPs with source and possessor indirect objects, the difference is not only greater, but mean acceptability ratings of a+DPs are below 2. This means that "*a*" is not generally accepted with indirect objects that are not compatible with its meaning, indicating that "*a*" may indeed be a contentful preposition in BP.

*Figure 9: Mean acceptability ratings of 3rd person PPs and a+DPs in the AJT*




Note: PP3rd: 3rd person PP

The results of Study 1 suggest that DOCs and POCs are equally acceptable in BP only when the indirect object has the semantic roles of goal or source. Although benefactive, and possessor datives are still accepted by BP native speakers, there is preference for POCs when the argument has the role of benefactive or possessor. These results suggest that DOCs and POCs are still part of BP grammar but there is a tendency in BP, unlike in Spanish, to prefer POCs. In addition, the comparison between the acceptability of 3rd person a+DPs and 3rd person dative clitics supports Torres Morais and Berlink's (2007), Silva's (2007) proposals, and Torres Morais and Salles' (2010) interpretation that "*a*" is always a full preposition in BP, unlike in EP. The preposition "*a*" was only accepted with goal and benefactive arguments, which are the only arguments that are compatible with the meaning of "*a*". This preposition, similarly to para 'for', indicates the end point of a movement or the intended possessor of an object

that is being transferred. It would be incompatible with the meaning of the full preposition "*a*" to precede a static possessor or the source of an object that is being transferred. If "*a*" were a dative case marker, the direction of the movement or the absence of movement would not have affected BP speakers' judgments. Moreover, if "*a*" were a dative case marker the ratings of a+DPs should have been similar to the ratings of dative clitics in all semantic categories.

Finally, against my initial predictions, 1st and 3rd person datives were not rated differently. This may be because the AJT was presented to the participants in written format. In formal written register, 3rd person dative clitics are still used, despite their almost complete absence in colloquial spoken BP.

Although the results of Study 1 show differences between the acceptability of POCs and DOCs, they do not seem to entirely reflect colloquial or spoken BP, perhaps due to the modality of the task used. To compare written and spoken language and to capture more subtle differences related to register, a second study was conducted.

## 3.3. Study 2

Study 2 was designed not only to test acceptability and use of POCs and DOCs by BP native speakers, but also to test the acquisition of semantic and syntactic properties of the dative alternation by L3 learners of BP, to be described in Chapter 5. Three experimental tasks were included in Study 2: an AJT, a grammaticality judgment task (GJT) and a picture description task. Considering that learners may show limitations in comprehending and processing long sentences in a long task, the AJT used in Study 1 was split into a short AJT and a short GJT. The sentences were

simplified and reduced in length as well. Acceptability of dative clitics with different semantic roles (goal, source, benefactive or possessor) was tested through the AJT, and the structures related to the dative alternation, e.g. PPs or clitic doubling, were tested through the GJT. The picture description task intended to capture preferences in use of non-dative vs. dative constructions in spoken BP.[27]

Therefore, in Study 2 BP native speakers were tested on their acceptance of 1st person dative clitics and on oral production of dative vs. non-dative constructions in contexts in which the indirect object had different semantic relations with the direct object: goal, source, benefactive and possessor. Based on the description of the phenomenon presented in Chapter 2 and on the results obtained in Study 1, for Study 2 I predicted that acceptability of written sentences and oral production would present a very different pattern due to grammatical differences between colloquial speech and formal register present in BP. Despite accepting datives when the indirect object has different semantic roles, BP native speakers would only use 1st person dative clitics when the indirect object has the semantic role of goal. They would prefer non-dative constructions when the argument is a source, a benefactive or a possessor.

### 3.3.1. Participants

All participants who completed the AJT, the GJT, and the picture description task also completed a language background questionnaire and a proficiency test in

[27] Because for the present analysis I am focusing on the acceptability and use of DOCs vs. POCs depending on the semantic role of the indirect object, in this Section only the results of the AJT and the picture description task will be reported and analyzed. The results of the three tasks with data collected from L3 BP leaners and BP native speakers will be presented in Chapter 5.

Portuguese, which included a multiple-choice cloze test, a multiple-choice vocabulary test and a multiple-choice listening comprehension test. The language background questionnaire was used to obtain demographic information as well as information about the subjects' language experience. The proficiency test was used to see whether subjects were paying attention when completing the tests. To be included in the analyses BP native speakers' accuracy in the proficiency test must be of at least 80%.

The language background questionnaire, the proficiency test, the GJT and the AJT were completed by 27 BP native speakers; one of which did not complete the picture description task. Three of 27 participants were eliminated from the analyses: an early Portuguese-Japanese bilingual; a participant who was born and raised in the Northern Region of Brazil, where there are differences regarding the use of prepositions and object clitics; and a participant whose percentage of accuracy in the proficiency test was 74%. All the remaining 24 subjects were born in the Southeastern Region of Brazil, and were raised and educated in Portuguese. They scored at least 40 out of 50 in the proficiency test. Finally, all BP native speakers were either college students or had a college degree. Information about the BP native speakers' age and proficiency test score is displayed in Table 7 below.

*Table 7: Participants' mean age and proficiency score*

| **BP native speakers** | **Age** | **Proficiency test score (maximum 50)** |
|---|---|---|
| n = 24 | Mean = 25.92 | Mean = 47.08 |
| | SD = 5.18 | SD = 2.04 |
| | Range 18-33 | Range 42-50 |

In the language background questionnaire all subjects were asked to mention their knowledge of languages other than Portuguese and to self-rate their proficiency level in each foreign language they knew. All native speakers of Portuguese reported knowledge of at least a second language (L2) and 46% reported having at least some knowledge of one or more languages besides the L2. All but 2 participants learned their L2 entirely in the classroom. One of them, besides language courses, also participated in a study abroad program and the other one learned a little bit of his L2 through music and videogames but has never had formal instruction. All subjects reported having knowledge of English, mainly as their L2, and 8 subjects reported knowing Spanish. Other languages mentioned by the participants as their L3 were Arabic, German, Italian, Japanese and French. All participants who mentioned these languages reported having a beginner level of proficiency in them. Information about participants' self-rating in English and Spanish is displayed in Table 8.

*Table 8: Number of subjects in each proficiency level of English and Spanish*

| **English** | | | **Spanish** | | |
|---|---|---|---|---|---|
| Adv | Interm | Begin | Adv | Interm | Begin |
| 10 | 5 | 9 | 2 | 3 | 3 |

Notes: Adv: advanced level, Interm: intermediate level, Begin: beginner level

### 3.3.2. Tasks

The AJT intended to tap into native speakers' intuitions about 1st person dative clitics with different semantic roles, and the picture description task intended to capture their preferences between dative vs. non-dative constructions in spoken BP.

The AJT had a total of 32 sentences: 16 target items and 16 fillers. Half of the sentences was grammatical and the other half was ungrammatical. Target items were divided into 4 categories according to the semantic role of the indirect object. In all the target items the indirect object was expressed by a 1st person dative clitic. Since the 3rd person dative clitic is not used in the colloquial variety of BP in any of the semantic categories and the AJT in Study 1 failed to capture differences between 1st and 3rd person dative clitics, 3rd person datives were not included in this test. This AJT was also shorter than the one used in Study 1, because it tested only 1st person dative clitics with different semantic roles. Furthermore, the sentences were also shorter and less complex than the ones used in the AJT of Study 1. The test was presented to the participants in a written format[28]. Table 9 shows the four categories of the AJT and a sample item within each category (see Appendix C for the full list of test sentences).

[28] When piloting this task a written version was compared to a bimodal version of the task and there was no significant difference between the two modalities of presentation. Therefore, the AJT as well as the GJT were presented in a written format to the participants.

*Table 9: Categories and sample items of the AJT*[29]

| Semantic Role | Example |
|---|---|
| GOAL | A professora me ensinou o significado dessas palavras.<br>the teacher DAT CL-1s taught the meaning of-these words<br>'The teacher taught me the meaning of these words.' |
| SOURCE | A escola do meu filho me cobrou uma multa.<br>the school of-the my son DAT CL-1s charge a late fee<br>'My son's school charged me a late fee.' |
| BENEFACTIVE | Meu pai me construiu uma casinha de madeira.<br>my father DAT CL-1s built a house of wood<br>'My father built me a wooden house.' |
| POSSESSOR | ?O Roberto me reconheceu a voz imediatamente.<br>the Roberto DAT CL-1s recognize the voice immediately<br>'Roberto recognized my voice immediately.' |

The list of verbs used in each semantic category is presented in Table 10 below.

*Table 10: List of verbs used in each semantic context of the AJT*

| Goal | Source | Benefactive | Possession |
|---|---|---|---|
| *emprestar* 'lend' | *exigir* 'demand' | *comprar* 'buy' | *cortar* 'cut' |
| *ensinar* 'teach' | *tirar* 'take away' | *construir* 'build' | *reconhecer* 'recognize' |
| *perguntar* 'ask' | *cobrar* 'charge' | *preparar* 'prepare, fix' | *beijar* 'kiss' |
| *prometer* 'promisse' | *roubar* 'steal' | *compor* 'compose, make' | *adivinhar* 'guess' |

Although the test was presented in written format, the participants were instructed to judge the sentences based on how acceptable they would be in an informal conversation. These instructions intended to capture their intuitions on colloquial, daily use of the language and not on exceptional appearances of a construction in very formal written contexts or in literary texts.

To judge sentences in the AJT, participants were asked to use a 4-point scale, ranging from 'completely unacceptable' to 'perfectly acceptable', with a 'don't know'

[29] Of all kinds of indirect objects, only possessor datives are expected to receive low ratings in both formal and colloquial register.

option to rate each sentence. Unlike in Study 1, however, only the meaning of each end point of the scale was worded and the scale was presented in a bilingual English Portuguese format to all subjects to facilitate all participants' comprehension. The scale appeared in the instructions and was repeated in the top of every page of the AJT and the GJT as follows:

1 = completely unacceptable/completamente impossível
2
3
4 = perfectly acceptable/perfeitamente possível
don't know/não sei

The AJT was placed in a web-based survey tool called survey gizmo. The link to the task was sent separately to each subject and the test was completed in a place of his or her own convenience. The researcher was not present when participants completed this task.

In addition to judging sentences with 1st person dative clitics, the BP native speakers were asked to make oral descriptions of pictures in which they had to choose between a non-dative and a dative construction. The purpose of this task was to test how frequent each of these constructions are in the oral production of BP native speakers in different semantic contexts. Participants were provided with a sequence of pictures and 3 or 4 lexical elements they had to use to build a one-sentence oral description of each picture. The intention of giving learners the vocabulary they had to use was to make the task easier for L3 BP learners as well as to assure that participants used a specific verb that allowed either a POC or a dative construction. To elicit 1st as well as 3rd person constructions, the task was divided into two parts. In the

first part participants saw all the pictures and described the scenes from an external point of view, using 3rd person indirect objects. In the second part, they saw the same pictures again, but they had to put themselves in the place of one of the characters in the picture and describe the scene from the perspective of that specific character. For the second description participants were required to use 1st person indirect objects. Native speakers' oral production was recorded, transcribed, and coded for the type of phrase used to express the indirect object.

The task had a total of 32 pictures: 16 target items divided in 4 semantic categories and 16 fillers. Each target picture was used to elicit 1st and 3rd person indirect objects, for a total of 32 target contexts. The categories of the picture description task are displayed in Table 11.

*Table 11: Categories of the picture description task*

| Goal | | Benefactive | | Source | | Possession | |
|---|---|---|---|---|---|---|---|
| 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd |

One picture of each semantic category with expected responses for 1st and 3rd person is found below (see Appendix D for all test items, including filler pictures).[30]

[30] After the first group of 8 subjects was tested, an item within the benefactive context was substituted. In the previous picture it was not clear for participants that one of the characters should be interpreted as the benefactor or as one of the agents of the action. The results for this specific item will not be considered in the analyses.

GOAL

carteiro – entregar – pacote – mulher
*postman – to hand – package – woman*

**1st p**: O carteiro me entregou o
the postman DAT CL-1s handed the
pacote.
package.

O carteiro entregou o pacote para mim.
the postman handed the package to me.

**3rd p**: O carteiro entregou o pacote para a
The postman handed the package to the
mulher.
woman.

BEFEFACTIVE

Julia – fazer – bolo – Carlos
*Julia – to bake – cake – Carlos*

**1st p**: A Julia fez um bolo para mim.
The Julia baked a cake for me.

**3rd p**: A Julia fez um bolo para o Carlos.
The Julia baked a cake for the Carlos

SOURCE

filho – ganhar – jogo – pai
*son – to win – game – father*

**1st p**: O meu filho ganhou o jogo de mim.
The my son won the game from me.
'My son beat me at the game.'

**3rd p**: O filho ganhou o jogo do pai.
The son won the game from-the father.
'The son beat the father at the game.'

POSSESSOR

barbeiro – cortar – cabelo – menino
*hairdresser – to cut – hair – boy*

**1st p**: O barbeiro cortou o meu cabelo.
The hairdresser cut the my hair

**3rd p**: O barbeiro cortou o cabelo do menino.
The hairdresser cut the hair of-the boy.

The list of verbs used in each semantic category is presented in Table 12.

*Table 12: List of verbs used in each semantic context of the picture description task*

| Goal | Source | Benefactive | Possession |
|---|---|---|---|
| *entregar* 'hand' | *cobrar* 'charge' | *ler* 'read' | *cortar* 'cut' |
| *ensinar* 'teach' | *tirar* 'take' | *cantar* 'sing' | *lavar* 'wash' |
| *dar* 'give' | *tomar* 'take away' | *preparar* 'prepare, fix' | *examinar* 'examine' |
| *mostrar* 'show' | *ganhar* 'win' | *fazer* 'make' | *olhar* 'look' |

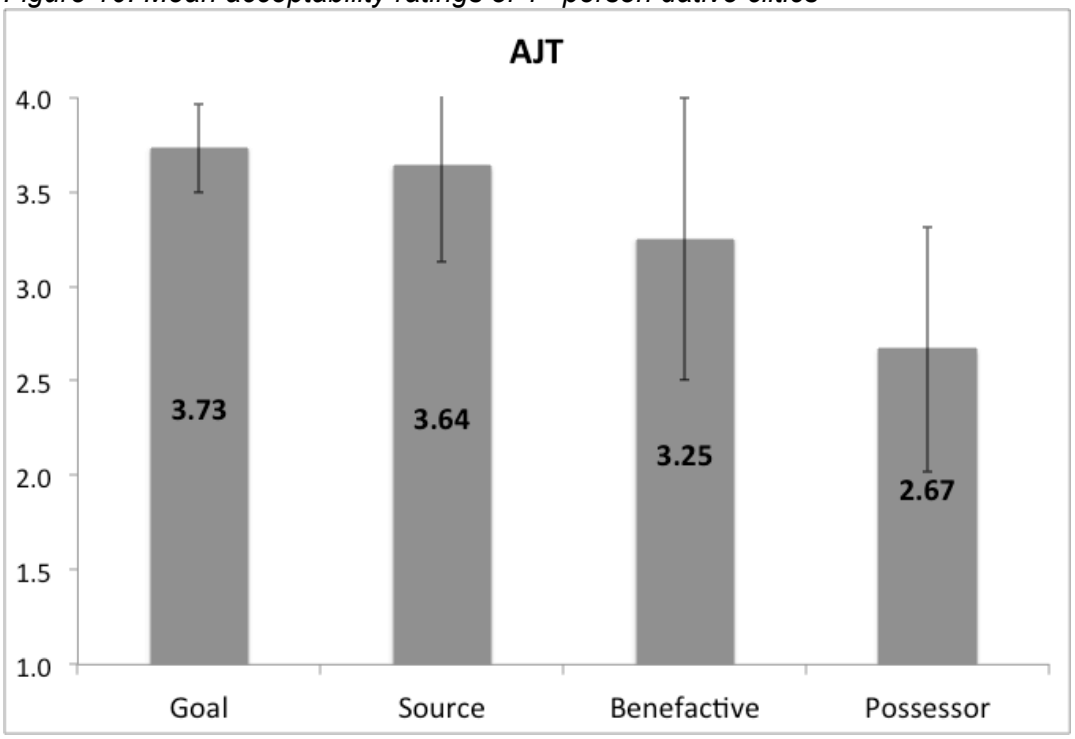
Participants were instructed to use the words that appeared below the picture to build a sentence describing the scene in the picture. The pictures were presented to the participants in a computer screen and the answers of the participants were audio recorded. Many participants met with the researcher in person to complete the task and others were audio recorded via skype. In all cases the recording session was closely followed by the researcher. After the participants' oral production was recorded, all sentences were transcribed and each of them was coded for the type of phrase used to express the indirect object (e.g. PP, a+DP, dative clitic). For the numerical analyses, the percentages of each phrase type used with goal, source, benefactive and possessor indirect objects were calculated.

### 3.3.3. Results

#### 3.3.3.1. AJT

The AJT included only 1st person dative clitics with all four semantic roles and the results are similar to what was found in Study 1. Figure 10 presents mean acceptability ratings of 1st person dative clitics with the semantic roles of goal, source, benefactive and possessor. A decline in the mean acceptability ratings and an increase in variation is observed when moving from arguments that have the semantic role of goal towards those that have the semantic role of possessor.

*Figure 10: Mean acceptability ratings of 1st person dative clitics*

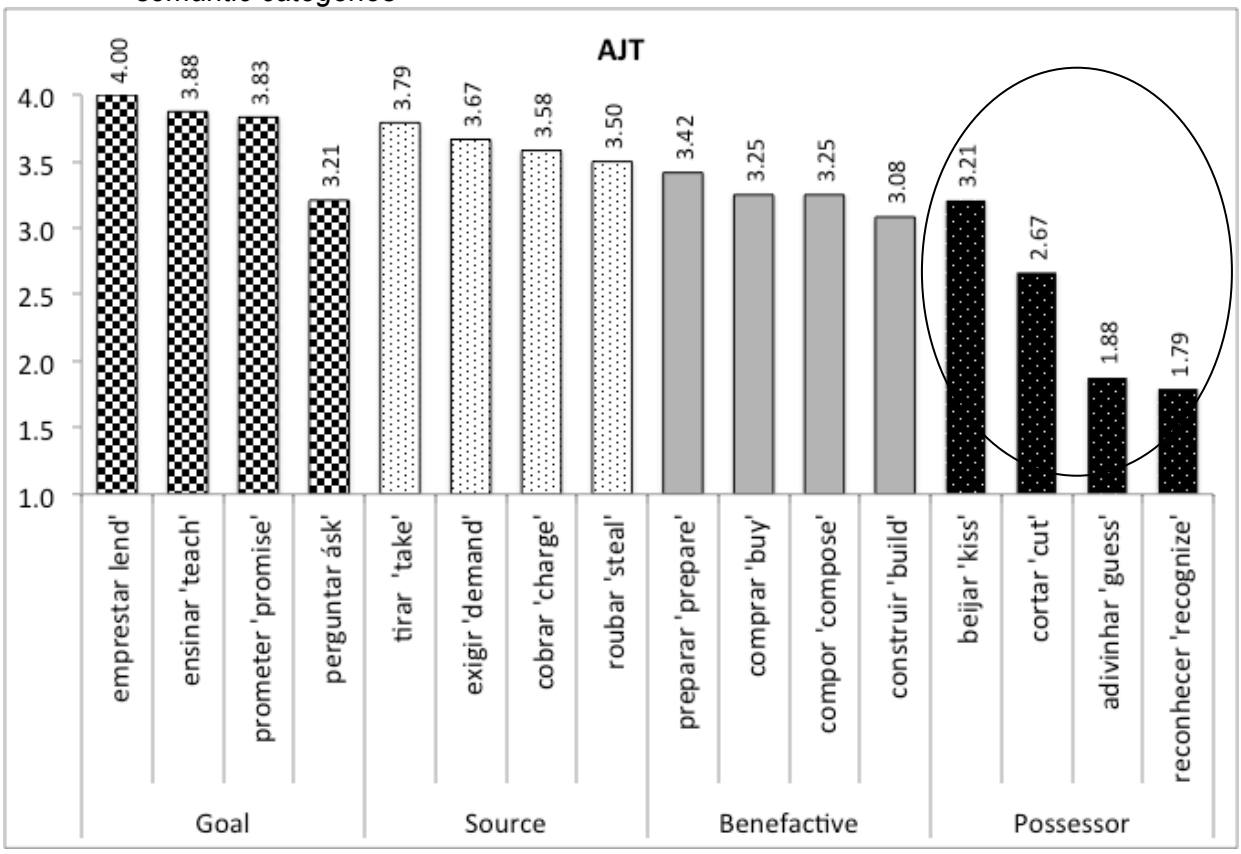



A repeated-measures ANOVA on the results of the short AJT revealed a main effect of semantic role, $F(3,69) = 35.79$, $p < .05$, and contrasts indicated that the acceptability of 1st person dative clitics with the semantic role of possessor differed

significantly from the acceptability of the other three types of dative clitics: benefactive, $F(1,23) = 35.5$, $p < .05$, source, $F(1,23) = 62.72$, $p < .05$, and goal, $F(1,23) = 117.59$, $p < .05$. In addition, there was a significant difference in acceptability ratings between goal and benefactive $F(1,23) = 5.57$, $p < .05$, but no significant difference between goal and source $F(1,23) = 0.67$, $p = .421$. That is, goal and source datives were rated significantly higher than benefactive and possessor datives, and possessor datives were rated significantly lower than all the other three kinds of datives.

In order to further explore these differences in acceptability of dative clitics with different semantic roles, the mean acceptability rating for each verb within the four semantic categories was calculated, and individual analyses on the data of the AJT were conducted. Figure 11 displays the mean acceptability rating of each verb in the four semantic categories.

*Figure 11: Mean acceptability ratings of 1st person dative clitics for each verb within the four semantic categories*



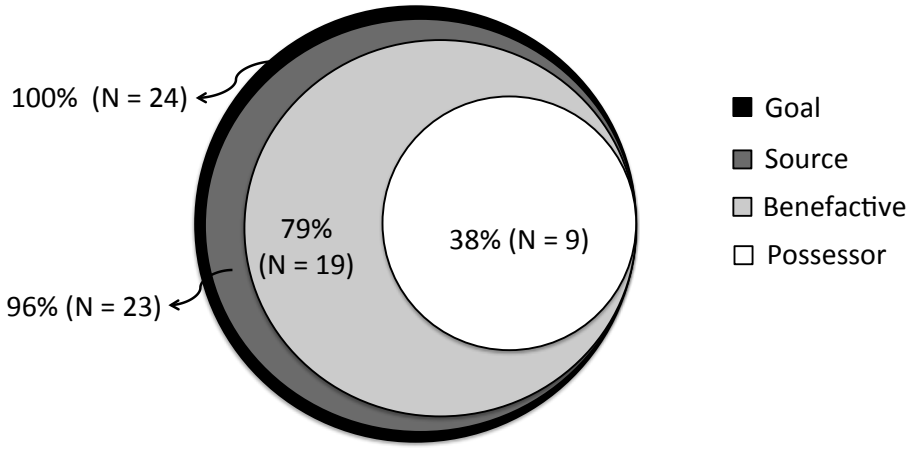

The acceptability ratings vary more depending on the verb within the category of possessor datives, whereas when the dative clitic is a goal, a source or a benefactive, there is less variability. That is, possessor datives were not only rated significantly lower than all the other three kinds of datives, but there was also a greater variation on the ratings depending on the verb. Within the semantic category of goal the verb *perguntar* 'ask' also had a lower rating when compared to the other verbs in the same category.[31] To further explore the source of this difference, some of the subjects were asked reasons why they gave a low rating to this particular sentence and their answers

[31] To be more certain that the lower ratings of *perguntar* 'ask' were related to this specific test item, the mean ratings of the verbs used for the semantic category of goal in the AJT of Study 1 were compared. Although the four verbs used in Study 1 were different from the ones used in Study 2, their mean acceptability ratings were very similar.

suggested that the low ratings are related to the kind of direct object used and not to the fact that the indirect object was a 1st person dative clitic.

In order to compare participants' ratings of dative clitics with different semantic roles, first, it was determined whether each of the 24 participants accepted or rejected goal, source, benefactive or possessor datives. The cut-off point for acceptability was set above chance level (2.5 in the 1-4 scale). In other words, if the participant's mean for a semantic category was 2.75 or higher, this participant was categorized as accepting dative constructions with arguments that had that particular semantic role. Figure 12 displays the number of participants who accepted datives with each of the four semantic roles. In addition, Figure 12 shows that acceptability is not random, and that the group of subjects who accepted source datives is a subset of the group who accepted goal datives. Similarly, the group of subjects who accepted benefactive datives is a subset of the group who accepted source datives, and so on. That is, accepting dative possessors entails accepting datives with the semantic roles of benefactive, source and goal as well.

*Figure 12: Number (N) and percentage of subjects who accepted dative clitics with each semantic role*




In summary, the verb analysis and the individual analyses show that the acceptability of dative clitics with the semantic role of possessor depends on the verb as well as on the individual. Moreover, BP native speakers only accept dative possessors when they accept datives with the semantic roles of benefactive, source and goal as well.

### 3.3.3.2. Picture description task

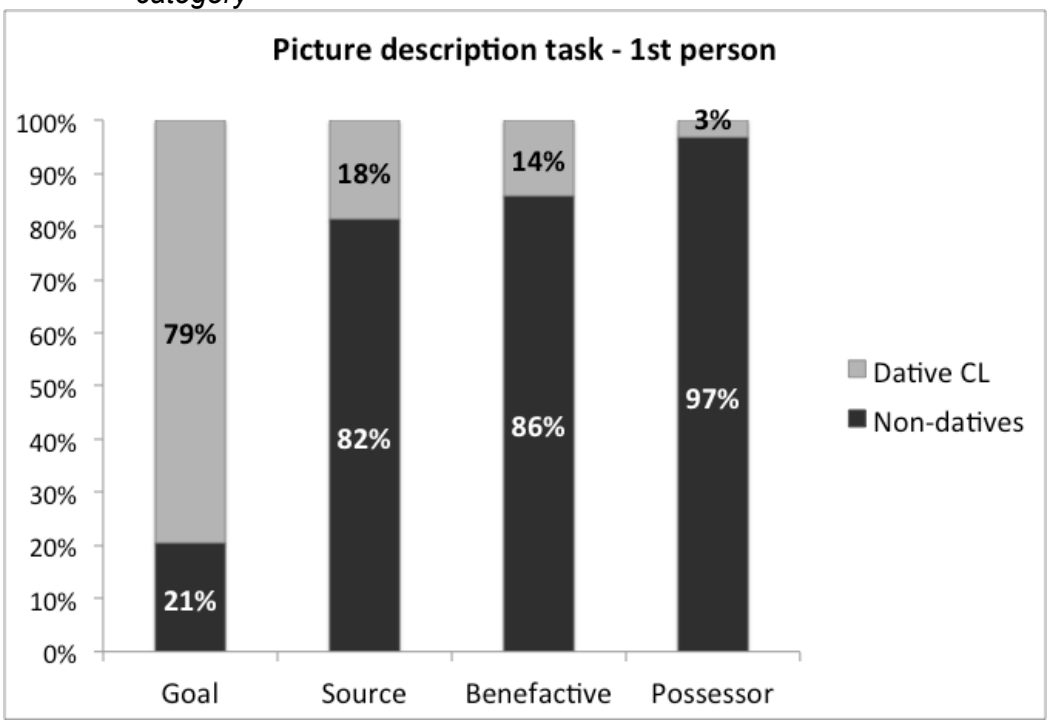
The picture description task assessed the participants' production of 1st and 3rd person arguments that have the semantic roles of goal, source, benefactive and possessor. Because only 1st person dative clitics were tested for acceptability and were produced by the BP native speakers in the picture description task, the results of 1st and 3rd person contexts will be presented separately. Figure 13 displays 1st person dative and non-dative constructions in the four semantic categories. Non-dative constructions included PPs, as in (70), and possessive pronouns, as in (71), which appeared with

arguments that had the semantic role of possessor and with some verbs when the argument was a source.[32] A high percentage of dative clitics was only produced when the indirect object had the semantic role of goal. With the other three semantic roles, the BP native speakers had a strong preference for PPs or possessive pronouns.

(70) O golfinho tomou a bola de mim.
The dolphin took the ball from me
'The dolphin took the ball from me."
(participant #100, BP native speaker)

(71) Minha mãe está lavando meu cabelo.
My mom is washing my hair
'My mom is washing my hair.'
(participant #103, BP native speaker)

*Figure 13: Percentage of 1st person dative clitics vs. 1st person non-datives in each semantic category*




Note: CL: clitic

[32] a+DPs were not produced with 1st person indirect objects by the BP native speakers.

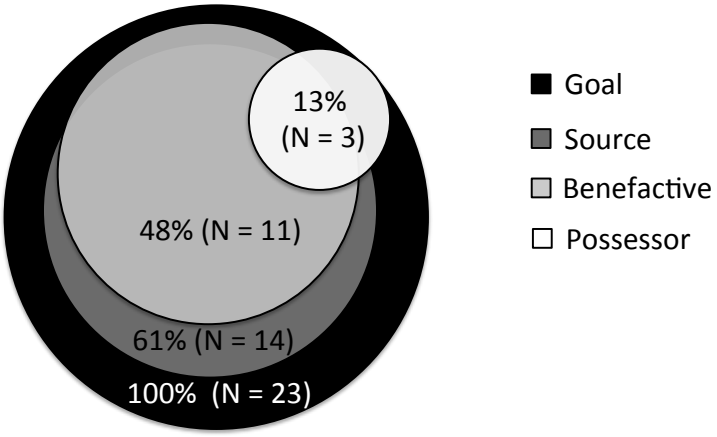
A repeated-measures ANOVA on the results obtained in the 1st person context revealed a main effect of semantic role, $F(3,66) = 149.35$, $p < .05$. Contrasts indicated that the production of 1st person dative clitics with the semantic role of goal was significantly higher than the production of 1st person dative clitics with the semantic roles of source, $F(1,22) = 169.93$, $p < .05$, benefactive, $F(1,22) = 197.02$, $p < .05$, and possessor, $F(1,22) = 427.78$, $p < .05$. In addition, the production of 1st person dative clitics with the semantic role of possessor was significantly lower than the production of 1st person dative clitics with the semantic role of source, $F(1,22) = 16.33$, $p < .05$, and benefactive, $F(1,22) = 9.91$. $p < .05$. There was no significant difference between the production of 1st person dative clitics that had the semantic roles of source and benefactive, $F(1,22) = 1.65$, $p < .05$.

Individual analyses on the results of the picture description task were conducted as well. The production of one 1st person dative clitic with a particular semantic role was enough to include the participant in the group who produces dative constructions in that specific semantic category. The results show a similar pattern to the one that was found in the individual analyses on the results of the AJT. Participants who produced possessor datives also produced benefactive, source and goal datives, and so on. Only two of the 23 participants who completed this task did not follow this pattern. One of them produced a benefactive dative clitic but did not produce source dative clitics and the other one produced a possessor dative clitic and did not produce benefactive and source dative clitics. Except for these two participants, all the other 21 BP native speakers followed the pattern described above. The difference between the individual analyses conducted on the results of the AJT and those conducted on the results of the

picture description task was that the number of participants who produced source, benefactive and possessor datives were smaller than the number of participants who accepted these structures.

Figure 14 displays the number of subjects who produced datives with each of the four semantic roles.

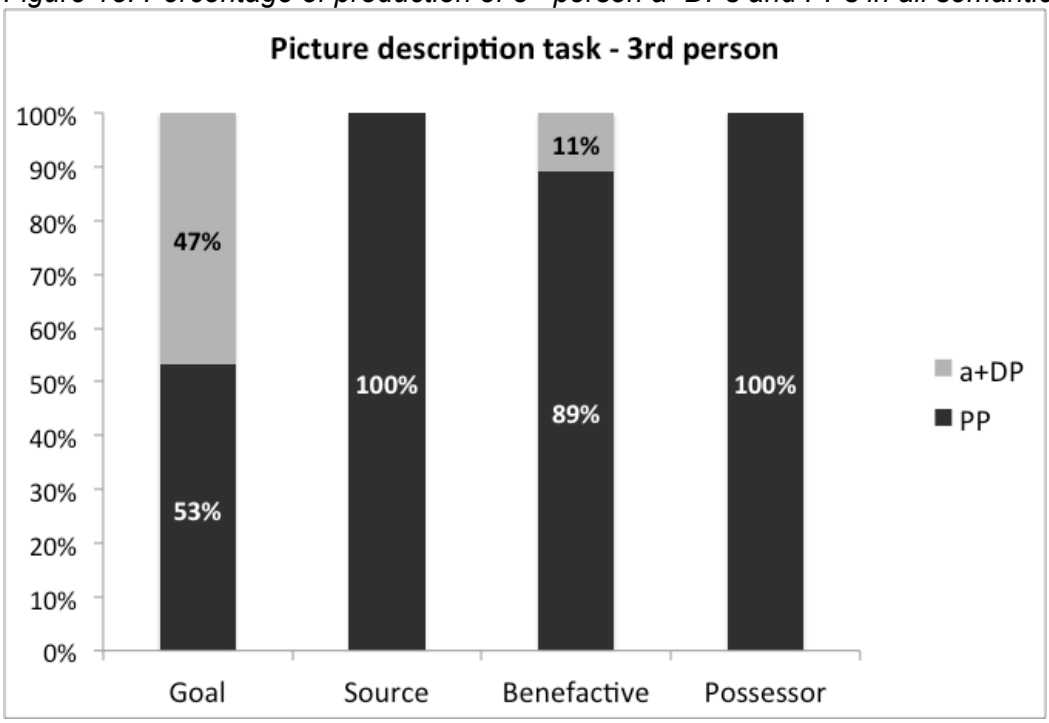
*Figure 14: Number (N) and percentage of subjects who produced 1st person dative clitics with each semantic role*




As stated above, the BP native speakers did not produce 3rd person dative clitics. Because BP does not allow clitic doubling and the referents were not previously mentioned in the context of the task, it was expected that participants would not produce 3rd person dative clitics. Nevertheless, the BP native speakers did produce DPs proceeded by *a*, but only with arguments that had the semantic roles of goal and benefactive, as shown in Figure 15. A repeated-measures ANOVA revealed a significant main effect of semantic role when comparing the percentage of a+DPs in each semantic category, $F(3,66) = 22.91$, $p < .05$. A simple contrast using goal as the reference category indicated that the production of a+DPs that had the semantic role of

goal was significantly higher than the production of a+DPs that had the semantic role of benefactive, $F(1,22) = 18.72$, $p < .05$.

*Figure 15: Percentage of production of 3rd person a+DPs and PPs in all semantic categories*




Notes: a+DP: DP preceded by "a", PP: prepositional phrase

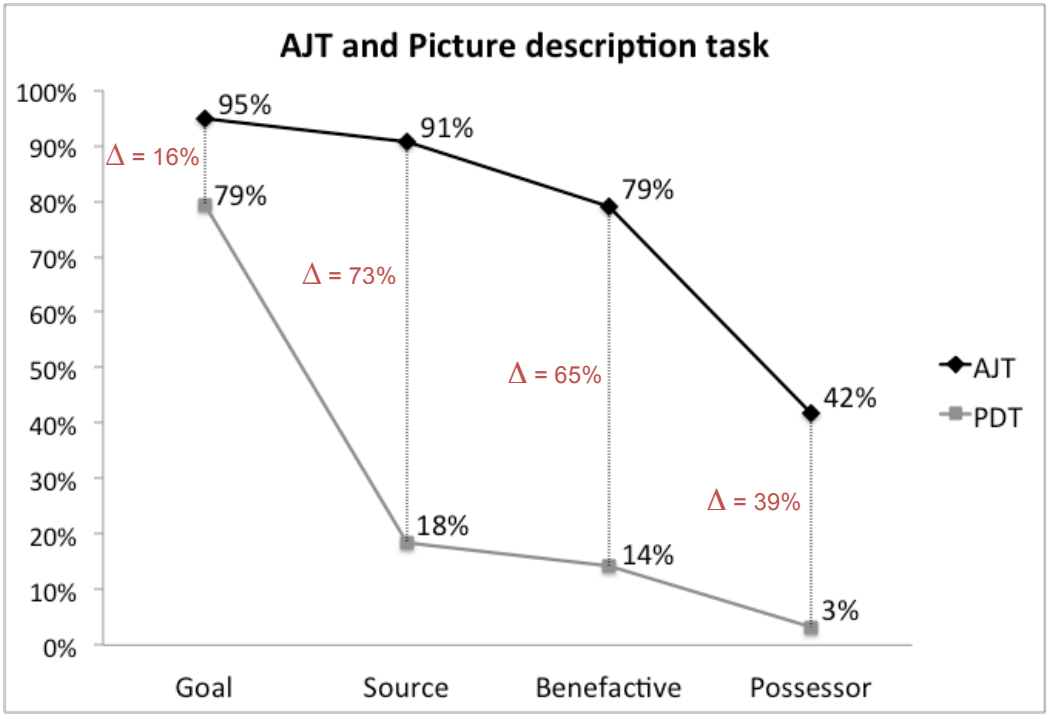
These results are compatible with the findings of Study 1, in which a+DPs were only accepted by the BP native speakers when the semantic role of the indirect object was either goal or benefactive.

### 3.3.3.3. Comparing the results of the AJT and the picture description task

A comparison between acceptability and oral production of 1st person dative constructions is presented below. To compare the results of the AJT with those obtained with the picture description task, percentage of acceptability instead of mean acceptability ratings were used. Percentage of acceptability of dative clitics for each

category was calculated by establishing 3 as the cut-off point in the 1-4 scale. In other words, sentences that received scores 3 and 4 were considered as acceptable and sentences that received scores 1 and 2 were considered as unacceptable for each semantic category. The percentage of acceptability of dative clitics in each semantic category for each participant was calculated by dividing the number of sentences that the participant rated as acceptable by 4, which is the total number of tokens in each category. For instance, if a participant rated 2 out of the 4 tokens of source datives at or above 3, the percentage of acceptability of source datives for this participant would be 50%. Figure 16 displays the difference between the mean percentage of acceptability and the percentage of production of 1st person dative clitics within each semantic category.

*Figure 16: Mean percentage of acceptability and percentage of production of 1st person dative clitics*




Note: PDT: picture description task

Differences between acceptability and production (represented by Δ in the chart) were small only in the case of goal datives, which were considered acceptable 95% of the time and were produced 79% of the time. Percentage of acceptability of source, benefactive and possessor datives were much higher than their frequency in oral production, reflecting differences between colloquial and formal BP.[33]

### 3.3.4. Summary of the results

To recapitulate the results of Study 2, 1st person dative clitics were accepted and used productively when they had the semantic role of goal. On the other hand, datives were accepted but rarely produced within the semantic categories of source and benefactive. Possessor datives were neither accepted nor produced by the BP native speakers. Furthermore, individual analyses also revealed that there is a hierarchy of semantic roles in both acceptability and production. More specifically, accepting or producing possessor datives entailed accepting or producing benefactive, source and goal datives as well. Similarly, accepting or producing benefactive datives presupposed accepting or producing source and goal datives; and so on.

Although the results of Study 1 suggested that DOCs and POCs are still part of the grammatical system of BP, Study 2 seems to indicate that PPs or possessive pronouns are taking over dative constructions and are becoming the preferred option in BP. The results of Study 2 also indicate that there is directionality in the loss of datives.

[33] I acknowledge that differences between acceptability and production of dative clitics may be due to a task effect as well. Because the AJT and the picture description task intended to elicit two different registers (colloquial and formal), they differed in modality (written vs. oral), type of response (judgment vs. production) and speed (offline vs. online), which may have motivated different responses.

## 3.4. Discussion

The two studies reported here investigated the morphosyntactic status of the dative clitics that are still productively used in BP and what kind of predicates still allow dative constructions. To answer these research questions BP native speakers were tested on their acceptability and oral production of dative vs. non-dative indirect objects with different semantic roles: goal, source, benefactive and possessor. Based on the results obtained in these two studies, I discuss whether applicative phrases and the dative case marker "*a*" are still part of BP grammar and what the morphosyntactic status of the dative clitics that are still used in BP is. Finally, I discuss as well how the undergoing linguistic change that is affecting dative constructions in BP seems to pose an interesting theoretical question to the interpretation of dative constructions as DOCs.

Differences between production and acceptability of dative constructions as well as differences in acceptability and production of goal, source, benefactive and possessor datives seem to confirm that BP grammar is moving away from dative constructions and some kinds of datives have been more affected than others. Possessor datives are the most affected of all kinds of datives, followed by benefactive and then by source datives. The only kinds of datives that are still quite productive in more formal written language as well as in oral colloquial register are 1$^{st}$ and 2$^{nd}$ person goal datives. The results of the picture description task also indicate that 1$^{st}$ person dative clitics are the preferred option by BP native speakers when the argument has the semantic role of goal.

In the case of source datives, their mean acceptability rating did not differ significantly from that of goal datives in both studies. Nevertheless, high acceptability

(mean = 3.64) did not mean high frequency in oral production (18%); which at first glance leads to the conclusion that although this construction is present in the grammar of BP native speakers, it does not seem to be very active in the everyday use of the language. However, it is necessary to take into account that 23 out of 24 subjects accepted 1st person dative clitics with the role of source, and 61% of the participants produced at least one sentence with a source dative out of the four pictures that they had to describe within this semantic category. Source dative clitics are quite common, mainly in cases in which the counterpart with the PP is not available, like examples a and b in (72) and (73). On the other hand, with ambiguous verbs like *comprar* 'buy' or *alugar* 'rent', the dative clitic can only refer to the goal or the beneficiary of the action and can never have the meaning of source (74).[34] Furthermore, despite 1st and 2nd person datives being very productive with the verb *tirar* 'take (away)' in constructions like *tirar uma dúvida* 'have a question cleared up' or *tirar um peso das costas* 'take the weight off one's shoulders', they sound odd with *tirar uma foto* 'take a picture'. Finally, although dative constructions are possible and still productive when the argument has the role of source, the tendency to avoid the use of dative clitics is evident, since an alternative construction with a possessive pronoun is also frequently heard when the possession relation is part of the meaning of the sentence, as can be seen in (72) and (73). For instance, in the 1st person context of the picture description task, non-dative constructions with the role of source were used 82% of the time, of which 35% were possessive pronouns and 47% were PPs.

[34] The verb comprar 'buy' was initially included in the AJT of Study 1 within the source category but was excluded form the numerical analyses. The mean rating of this test item was 2.42, whereas the mean ratings of the other three items in this category were above 3.

(72) a. Esse assunto está me tirando o sono.
this subject is DAT CL-1s taking the sleep

b. *Esse assunto está tirando o sono de mim.
this subject is taking the sleep from me

c. Esse assunto está tirando meu sono.
this subject is taking my sleep

'This subject is keeping me awake.'

(73) a. Refazer esse trabalho me tomou tempo.
redo this work DAT CL-1s took time

b. *Refazer esse trabalho tomou tempo de mim.
redo this work took time from me

c. Refazer esse trabalho tomou meu tempo.
redo this work took my time

'Redo this work took me time.'

(74) *Ele me comprou flores. (meaning: ele comprou flores de mim)
he DAT CL-1s bought flowers
'He bought flowers from me.'

Mean acceptability ratings of benefactive datives were significantly lower than those of goal datives in the AJT of Study 1 and the AJT of Study 2, and they were produced only 14% of the time in the picture description task. Individual analyses showed that less than half of the participants (48%) produced benefactive datives at least one time out of the four picture descriptions within this category. Furthermore, a big difference between acceptability and production was also found in the case of benefactive datives; which means that they are almost absent in the colloquial variety of the language. This leads to the conclusion that the process of moving away from dative constructions to privilege PPs has affected arguments that have the role of benefactive even more than those that have the role of source. Finally, the fact that the acceptability

and production of goal datives and benefactive datives differ greatly challenges the interpretation that dative arguments are licensed by applicative heads (Cuervo 2003, Torres Morais & Berlinck 2006, Torres Morais & Salles 2010). Because these two kinds of datives have a very different behavior in BP and are affected in different ways by the process of language change, one may speculate that they may indeed not be both licensed by the low APPL-TO. If two different kinds of applicative heads were proposed, it would be necessary to define what would be the semantic difference between them. The other possibility would be to assume that goal indirect objects are core arguments of the verb and are directly associated to the root (Pujalte 2008). This alternative will be further discussed below.

Finally, possessor datives had low acceptability ratings, a great variation on acceptability depending on the verb and a small number of subjects who accepted them (38%). Regarding production, 1st person dative clitics that have the role of possessor were almost completely absent from the data (produced only 3% of the time). A comparison of possessor datives with the other three kinds of datives shows that this is certainly the semantic category that has been more affected by the loss of dative constructions. In the case of this semantic category, the results seem to indicate that PPs or possessive pronouns have taken over completely.

Another piece of evidence that BP is either in the process of losing dative constructions or confining them to 1st and 2nd person indirect objects with the semantic role of goal is related to the acceptability and production of a+DPs. The results of the AJT in Study 1 and the results of the picture description task in Study 2 show that "*a*" is only accepted and used with goals and benefactives, which are the only arguments that

indicate the end point of a movement (goal) or the intended possessor of an object that is being transferred (goal and benefactive). The meaning of both kinds of arguments is compatible with the meaning of the contentful preposition "*a*", unlike the meaning of source and possessor arguments. Furthermore, the results of acceptability and use of dative clitics and the results of acceptability and use of a+DPs show different patterns. On the other hand, the acceptability of a+DPs patterns with the acceptability of PPs with goal and benefactive indirect objects. This supports Torres Morais and Berlink's (2007), Silva's (2007), and Torres Morais and Salles' (2010) interpretation that "*a*" is always a full preposition in BP, unlike in EP and Spanish. That is, *a*+DPs are PPs and not dative constructions.

When individual results are looked into in more detail, the same hierarchy found among the different kinds of datives at a general level is confirmed at the individual level. None of the participants who accepted possessor datives did so without accepting benefactive, source, and goal datives as well. In other words, the process of language change that is causing the loss of datives seems to affect these grammatical structures in a specific direction in which possessor datives are affected first, followed by benefactive datives, and then by source datives.

Among BP native speakers, it is possible to find individuals whose grammar represent different stages in the process of losing datives. Some speakers, who have the full range of dative constructions in their internal grammar, accept dative clitics with all four semantic roles, whereas other speakers, who do not have only possessor datives in their internal grammar, will still accept dative clitics that have the semantic roles of source, benefactive and goal. There are also individuals who have an internal

grammar that represents a more advanced stage in the process of change, and they accept only goal and source datives. A very similar pattern was found in oral production, which corroborates the hypothesis that there is directionality in the process of losing dative constructions in BP. This can be inferred form the fact that individuals who, for instance, accept benefactive datives but do not accept source datives were not present in our sample. In other words, the results of Study 2 suggest that there is an implicational hierarchy between these four kinds of datives as represented in Figure 17 below.

*Figure 17: Hierarchy of dative constructions in BP*

**Goal datives < Source datives < Benefactive datives < Possessor datives**

One aspect that may explain the differences in acceptability and usage found with different kinds of indirect objects is that arguments that have the semantic role of goal, and usually those that have the role of source are part of the subcategorization frame of the verb. In addition, they can combine only with directional activity verbs and they indicate either the intended destination or source of an object. In other words, these two kinds of arguments have a syntactic as well as a semantic relation with the verb. Although benefactive arguments are not subcategorized by the verb they keep a semantic relation with the verb. That is, only transitive verbs of creation can combine with a beneficiary of the action they express. In the case of possessor arguments there is no semantic or syntactic relation between the verb and the applied argument; the relation is exclusively between the direct object and the possessor. This can explain the

implicational hierarchy among these different kinds of arguments and why there is directionality in the process of losing dative constructions. The more basic datives are the ones that have a closer semantic and syntactic relation with the verb and, hence, they will be the ones affected last by the process of change.

If each of these different arguments have different semantic roles and different syntactic and semantic relations with the verb, can they all be represented by applicative phrases, as proposed by Pylkkänen (2002), Cuervo (2003) and Torres Morais and Salles (2010)? In a later work, Cuervo (2010) pushes the applicative analysis to its logical extreme, by proposing that there are no verbs that select two internal arguments. According to Cuervo, the morphosyntactic properties of DOCs with so-called ditransitive verbs and monotransitive verbs are identical, which indicates that the syntactic and semantic relations between the direct object and the indirect object and their relation with the verb is exactly the same, be the verb ditransitive or not.

Against this view, Pujalte (2008, in press) argues that there are two different structures that represent dative arguments in Spanish dative constructions. In the cases in which the indirect object is a core argument of the verb, the indirect object merges with the root and there is no applicative head. However, when the indirect object is added to the syntactic structure of the verb, it is introduced by a low applicative phrase. Therefore, according to Pujalte's analysis, it is necessary to distinguish between argumental and non-argumental datives, because each one will have different syntactic representations, and thus, particular syntactic properties. This distinction seems to be more consistent with the results of Study 1 and 2 and with the interpretation proposed here. The non-argumental datives seem to be more vulnerable to the loss than the

argumental datives. This is why goal datives are more productive than the other kinds of datives in both colloquial and formal register in BP. Along the same lines, Galves et al (2005) also suggest that BP dative clitics invariably attaches to the verb that assigns them their θ-role and that BP clitics no longer have the status of object agreement.

Pujalte's proposal is not only more consistent with the behavior of dative constructions in BP, but also with constraints on passivization of structures with two internal arguments (Demonte 1994). English passivizes both the direct and the indirect objects of goal DOCs, as shown in (75), but has strong constraints for the passivization of any of the two internal arguments of the ben DOCs, as exemplified in (76). In Spanish, whereas goal dative constructions with ditransitive verbs admit passivization of the direct object, as in (77), in dative constructions with benefactive arguments the passive structure is ungrammatical, as shown in (78).[35] The asymmetry between the two kinds of DOCs found in English and Spanish seems to further suggest that, in fact, there are morphosyntactic differences between constructions with ditransitive and monotransitive verbs.

(75) a. The book was given Mary.

b. Mary was given the book.

(76) a. *The sandwich was fixed Mary.

b. *Mary was fixed the sandwich.

(77) El premio Nobel le fue concedido a Cela el año pasado.
the prize Nobel DAT CL-3s was awarded DAT case marker Cela the year past
'The Nobel prize was awarded to Cela last year.'

[35] Examples (75), (76), (77) and (78) are from Demonte (1994).

(78) *La casa le fue pintada a Juan ayer.
the house DAT CL-3s was painted DAT case marker Juan yesterday
'The house was painted for Juan yesterday.'

Finally, to claim that 1st and 2nd person indirect objects that are subcategorized by the verb are the only ones that are preferably expressed by a dative clitic, it is still necessary to explain, why participants' ratings of 1st and 3rd person datives were not significantly different in Study 1. Previous studies show that 3rd person dative clitics are almost completely absent of spoken BP (Berlinck 1997, Freire 2000, 2005 among others). Nevertheless, participants in Study 1 still accepted both 1st and 3rd person datives in contexts in which they would rarely be used in colloquial BP. Freire (2005) argues that dative clitics are learned through schooling and, therefore, they will appear more in formal written language and will be more accepted and used by speakers who have a high level of education. This explains why the participants in Study 1, whose level of education is very high, accept and comprehend sentences with 3rd person dative clitics in written language, even though they would barely use them when it comes to oral production. This difference in the use of datives between the formal and the colloquial varieties of BP, among other differences, has consequences for BP native speakers when they start going to school and are exposed to grammatical structures and properties that are not part of the language they learned at home. They have not only to master grammatical features that are only present in formal discourse and become "bilinguals" in their own language", but they have also to learn which variety to use in each social and communicative situation. Not only BP native speakers, but also learners of BP as a non-native language will be presented with a more difficult task when learning the dative alternation in BP. Because, they will be exposed to different

evidence in colloquial and formal BP, it may take longer for them to acquire properties of the dative alternation in BP and use them appropriately. The implications of being exposed to variable input to the non-native acquisition of BP will be further discussed in Chapter 6.

## 3.5. Conclusion

To summarize, the results of this study show that 3rd person datives are still accepted in written language, although BP native speakers hardly ever produce them in oral discourse. First person datives are accepted in written language when the semantic role of the argument is goal, source and benefactive, but are frequently produced in oral discourse only when the indirect object is the goal of the direct object. The analyses of individual results showed that there is an implicational hierarchy among the different kinds of datives, which can explain the directionality in the process of losing dative constructions in BP. These findings suggest that the process of losing datives in BP is related to the syntactic and semantic relationship between the verb and the indirect object: the stronger the relation between the verb and the argument the greater the possibility of expressing that argument with a dative. Therefore, dative clitics are more frequent and seem to be less likely to be affected by the process of losing datives when the indirect object is a core argument of the verb. In the cases in which the relation between the argument and the verb is weaker, dative constructions have been progressively substituted by PPs.

Regarding the syntactic status of datives, because goal datives and benefactive datives behave very differently on both acceptability and usage, Pylkkänen's (2002,

2008) and Cuervo's (2003) typology of applicative constructions do not seem to completely account for the dative constructions in BP. An interpretation that better explains the results of this study has to consider that there are at least two different structures to represent dative constructions: one for core arguments and another one for non-core arguments, along the lines of Pujalte (2008, in press). I assume, following Pujalte (2008, in press), that core arguments of the verb merge with the root and non-core arguments are added to the argument structure of the verb by an applicative head (Pylkkänen 2002, Cuervo 2003). Therefore, I agree with the claim that BP has completely lost applicative constructions, as proposed in Torres Morais and Salles (2010). Another possibility would be that dative constructions in Romance languages and DOCs have completely different underlying structures, against Demonte (1995), Masullo (1992), Cuervo (2003) and Torres Morais and Salles (2010), among others. Finally, differences between the productivity of 1st, 2nd vs. 3rd person datives in oral production are related to the fact that 3rd person dative clitics are confined to written and formal discourse (Galves et al. 2005), which may have triggered and/or may be accelerating the loss of dative constructions in BP.

Future work should continue to explore cross-linguistic differences and similarities between DOCs and dative constructions and whether Romance datives can be interpreted as DOCs.

# Chapter 4:

# Cross-linguistic influence in the acquisition of non-native languages

## 4.1. Introduction

Chapter 3 presented the two experimental studies conducted with BP native speakers and, based on the results obtained, an analysis of the dative alternation in BP was proposed. The present Chapter presents the background for the experimental studies described in Chapter 5, in which the data collected from L3 BP learners will be presented and briefly discussed. More specifically, in this Chapter I review previous findings and current debates on the role of cross-linguistic influence in multilingual language learning and use.

The field of second language acquisition (SLA) is concerned with the nature and process of learning an additional language besides the native language (Larsen-Freeman & Long 1991). The development of SLA as an autonomous area of research was particularly important because it could and still can provide essential insights about language learning that the study of first language (L1)[36] acquisition cannot provide (Flynn et al. 2004). One issue that is specifically related to the acquisition of a second language (L2) is cross-linguistic influence, and after extensive investigation, there is evidence that language transfer is a crucial phenomenon to understand any process of

[36] L1 acquisition refers to the process of children learning their native language.

non-native language acquisition. The possibility of studying specific phenomena such as cross-linguistic influence is one reason why SLA has had a relative independent development and has made crucial contributions to a variety of theories of language acquisition in general. Studies in SLA focus mainly on native language acquisition vs. non-native language acquisition at specific points in development and consider key aspects that distinguish one process from the other, including age of acquisition, cognitive maturity, presence vs. absence of prior linguistic knowledge, and Universal Grammar[37] (UG) accessibility. Regarding language transfer, the debate was restricted to how the L1 influences the process of acquisition of an L2. Studies that distinguished between the acquisition of the L2 and the acquisition of any other language beyond the L2 or that looked at how the L2 influences any subsequent language learning process are mostly missing in the SLA field. However, most scholars would agree that a more general theory of language acquisition must explain how the mind operates when one, two, or more languages are involved (De Angelis 2007).

More recently, motivated by the increased number of multilingual speakers, scholars have begun to distinguish between the acquisition of an L2 and the acquisition of subsequent languages. In the 1980s multilingual behavior and multilingual acquisition began to be examined more closely and systematically. Researchers on this field started to observe that prior knowledge of any language, not just the L1, as well as prior learning experience could significantly affect multilingual acquisition, production or comprehension.

[37] Universal Grammar is defined within generative approaches to language learning as the innate system of principles and properties responsible for human capacity of learning a language.

However, it is only since 2005 that there has been an increase interest in L3 acquisition from a generative linguistics perspective, with the majority of studies focusing on cross-linguistic influence (e.g. Bayona 2009, Flynn et al. 2004, Flynn 2009, Foote 2009, Ionin et al. 2011, Jin 2009, Leung 2005, Lozano 2002, Montrul et al. 2011, Na Ranong & Leung 2009, Rothman 2010, 2011). Cross-linguistic influence and language interaction show a higher degree of complexity in the case of multilingualism (Cenoz et al. 2001, Hammarberg 2001, Cenoz 2003, Leung 2006). One reason for this is that L2 learners have two linguistic systems that can influence each other —the L1 and the L2—whereas L3 or Ln learners have three or more different systems that can interact in processes of cross-linguistic influence. Another aspect that makes the situation of multilingual speakers much more complex than that of bilinguals, and cannot be overlooked, is the fact that order of acquisition, learning processes, and type of knowledge may present a higher degree of variation depending on the speaker and on the language or the language combination that is being considered. Critical questions are: 1) how to order previously known languages when the acquisition may have been simultaneous or intermittent; 2) whether or how to account for languages that the person knows just 'a little' or of which the person has only a specific type of command, like reading, for example (Hammarberg 2009). Due to the complexity of the process, these and other questions, mostly related to language transfer, have been raised in the studies of L3 acquisition. For example, is it easier to acquire an L3 than it is to acquire an L2? Does previous linguistic experience facilitate and enhance multilingual acquisition? More specifically, which factors determine transfer in the case of multilingual speakers?

Therefore, studies in L3 acquisition can determine the role of previously known languages in subsequent language learning and contribute to verifying whether language learning is a cumulative process (Flynn et al. 2004). That is, do all the sequential processes of language learning derive exclusively or mainly from the L1, or knowledge of all previously learned languages is equally important and available in subsequent language learning, regardless of order of acquisition, learning processes, learning environment, type of command and knowledge?

These questions, as well as most questions related to language transfer, can be better answered by investigating L3 acquisition or the acquisition of any language beyond the L2. As Flynn, Foley and Vinnitskaya (2004) point out, it is only possible to determine the role of the L1 in subsequent language learning when examining the acquisition of languages other than the L2. In addition, in order to build a more general theory about how our mind works when learning, storing and using language, it is paramount to consider situations in which two or more languages are involved and to specifically look at whether and how all the linguistic information available interacts. For instance, research with multilinguals –when compared to research with bilinguals– allows investigating the simultaneous influence of two or more languages on a target language or the interaction between two or more non-native languages; which are situations that can only be found when the speaker has a minimum of three languages in her mind (De Angelis 2007). Finally, L3 acquisition studies can shed light on debates related to UG accessibility (Flynn et al. 2004, Rothman et al. 2011).[38] One basic

[38] See Rothman et al. (2011) for more details on how access to UG can be tested looking at L3 initial state.

question that can only be answered in L3 acquisition studies, for instance, is whether UG is accessible in the same way as it was when the L2 was acquired if the learner continues to learn other foreign languages (Leung 2007). Therefore, by addressing at least part of the questions mentioned above, L3 acquisition research will not only contribute a great deal to theory building in the field of language acquisition, but it can also prove important in the articulation of a theory of the mind and language (Flynn 2009).

## 4.2. Concepts and terminology

Every time a new field of research is created it requires appropriate and precise terminology to be used. This is crucial for scholars in the field to understand each other as well as for the field to be well established and recognized. The new field of multilingualism and L3 acquisition has borrowed much of the terminology used in SLA, which has been very helpful. Yet, some of the terms used in L3 acquisition still need more precise and unified definitions, as well as specific definitions need to be expressed always by the same terms.

The problem starts with how to name the field itself. L3 acquisition already poses the problem of whether it refers to the acquisition of an actual third language or to the acquisition of any language beyond the L2. Furthermore, the language background of multilingual speakers can vary widely and it can be quite difficult to number the languages in a linear time scale (Hammarberg 2009). For example, how to name a learner who grew up bilingual and is learning another language after puberty? If just the number of linguistic systems is considered it can be argued that this is an L3 learner,

but then it would be necessary to assume that this learner lacks an L2. On the other hand, if order of acquisition is taken into consideration, this could be seen as a process of L2 acquisition. Another example would be a learner who grew up in a monolingual environment and started to learn two foreign languages at the same time. One of these languages was studied continuously whereas the other had an intermittent process of acquisition. Should both be considered L2s or should one of them be considered an L3 based on amount and type of exposure? Finally, there could be someone who grew up in a bilingual environment, studied a foreign language as a child, and as an adult had to start learning a fourth language. Would the process of learning the fourth language be studied as a case of L3 acquisition? Unfortunately, there are no well-established terms and definitions that take into consideration all the variety of language backgrounds found amongst multilingual speakers.

The terminology adopted in this work follows Hammarberg's (2009a) rationale about qualitative differences in the processes of language acquisition rather than order of acquisition alone. Thus, L3 acquisition is used in the present study to refer to the specific situation in which someone is currently using or acquiring a non-native language after having previous experience and/or knowledge of at least two languages. This person will be called a multilingual speaker which, based on what has been just said, can be defined as a person with knowledge of three or more languages. This is because, as most studies in the field of L3 acquisition, the present study focuses on cross-linguistic influence, and having two vs. having three or more linguistic systems that can influence each other has theoretical as well as methodological consequences.

Some of these differences were mentioned in Section 4 and others will be addressed in Section 4.3 below.

In sum, L3 acquisition and L3 learner have broad definitions and can refer to multiple and different linguistic situations; such as someone who grew up bilingual and is learning an additional language as an adult or to someone who grew up monolingual, learned a second language as an adult and is now learning an additional non-native language; among many other linguistic profiles that can be found. Because L3 acquisition refers to multiple language learning experiences, it became even more important to provide very specific and precise information on learners' linguistic background. And this is not only for research being conducted on L3 acquisition. If it is assumed that the linguistic systems present in someone's mind can interact –or at least be activated– when acquiring, producing or comprehending one of the languages that this person knows, providing detailed information about the language background of all participants in any experiment becomes important for every linguist working with experimental research.

Finally, language transfer and cross-linguistic influence are terms that are crucial for both bilingualism and multilingualism, and will be one of the key aspects of this investigation. Although cross-linguistic influence seems to be a more general and neutral term, language transfer is more frequently used and widely accepted in L2 and L3 acquisition works. These terms will be used interchangeably here with no differences in meaning; and the definition adopted will be adapted from Odlin.

> Transfer is the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired. (1989, p.27)

Skehan (2008) calls the attention for the fact that this definition is consistent with multilingualism and with different sources of transfer, which makes it compatible with both L2 and L3 acquisition. Furthermore, the use of the general term *influence* allows not only for considering positive as well as negative transfer, but also for building a more holistic view of transfer, which goes beyond the presence of specific words and structures of one language in the system of another language. These two aspects make this definition very appropriate; however, it is still necessary to consider that transfer or influence can also come from languages that were acquired after the target language and not exclusively from languages that have been previously learned. In other words, if a study focuses on the L2 of a particular group of learners, but these learners happen to be multilingual speakers, it is also necessary to consider the influence that the L2 may receive from any other language learned thereafter. Finally, although within the generative approach studies focus mainly on influence at the structural level, it is important to take into consideration similarities and differences at all linguistic levels, including the lexicon, the sounds or the discourse. As further discussed in Section 4.3.4 below, cross-linguistic influence has been repeatedly related to language similarity, but it is still unclear what the role of structural similarity or similarities at other linguistic levels is in facilitating or hindering cross-linguistic influence.

## 4.3. Language transfer in L2 and L3 acquisition

### 4.3.1. A historical overview of the role of language transfer in SLA

During the 1950s and the 1960s the study of language transfer was linked with Contrastive Analysis and most works were very influenced by Lado's (1957) ideas.

According to Lado, the linguistic elements of the foreign language that are similar to the learner's native language will be learned easily, whereas the elements that are different will have a higher degree of difficulty. This is because individuals tend to transfer the forms and meanings and the distribution of forms and meanings of their native language to the foreign language. Regarding theoretical aspects of language learning and use, Contrastive Analysis was connected to behaviorist theories, according to which language learning was a question of habit formation (Skinner 1957). Therefore, by knowing the exact linguistic areas where transfer from the L1 would occur foreign language teachers had the required knowledge to reinforce some habits and block others. In summary, within the Contrastive Analysis framework all errors made by L2 learners could be attributed to transfer from the L1 and could be avoided by processes of habit formation.

By the 1970s Contrastive Analysis started to face serious challenges because the predictive validity of its analyses seemed questionable (Odlin 1989). Empirical research began to show similarities in learning processes and types of errors made by L1 and L2 learners; which raised the red flag over attributing all foreign language learning difficulties to transfer from the L1. Moreover, studies in the field of error analysis started to find similarities between the errors made by learners with different L1 backgrounds learning the same L2. For instance, the acquisition of negation was one of the areas in which researchers first found evidence that transfer could not fully account for the process of its acquisition (Odlin 1989). In English the position of the negation particle is preverbal and involves the auxiliary system, whereas other languages, such as Norwegian, use postverbal negation. Therefore, Contrastive Analysis predicts that

native speakers of Norwegian would have difficulty mastering the use of negation particles in English and would frequently use postverbal negation. However, Ravem (1968) found that the use of preverbal negation was predominant among L1 Norwegian learning English, like in 'I not like that', and examples of postverbal negation were very few. Furthermore, predominance of preverbal negation was not only found among L1 Norwegian learners of English, but among native speakers of other languages (Schumann 1979). This kind of empirical evidence made skepticism about transfer grow among scholars and errors begin to be more frequently viewed as the result of developmental processes, or to be explained by the overgeneralization of rules of the target language to areas where they are not applicable.

More or less in the same period a major theoretical shift was taking place and Chomsky's theory of language acquisition and transformational syntax were becoming dominant while structuralism and behaviourism were becoming unatractive. After the strong criticism made by Chomsky (1959) to Skinner's (1957) behaviorist approach to language learning, the spread of his theory of Generative Grammar, and changes on methodology that cause research in the language acquisition field to be empirically based, there were important transformations on the way language transfer was viewed and analyzed. During the 1980s and 1990s generative researchers were focused on investigating syntactic components of the interlanguage grammar and were striving to explain whether they were mainly constrained by UG principles or whether they were the result of transfer from the L1.

### 4.3.2. Generative perspectives on the role of transfer

It is uncontroversial among Generative linguists that L1 acquisition is UG based and that UG guides L1 acquisition from initial to final state. For children raised in monolingual environments, learning the native language is the result of an interaction between the general possibilities that are part of UG and the language-specific features present in the L1 input. Because, when learning their L1, monolingual children do not have other linguistic experiences, language transfer is not part of the monolingual L1 acquisition. However, as mentioned earlier, bilingualism or multilingualism seems to be the norm in many parts of the world, and has become even more frequent in the last decades. Although cross-linguistic influence has been attested in cases of children acquiring two languages simultaneously (e.g. Döpke 2000, Müller & Hulk 2001), instances of cross-linguistic influence are restricted in early bilinguals and they seem to occur only under certain linguistic circunstances (Genesee 2006). Montrul (2006, 2008) points out that even with an independent development of the two linguistic systems, bilingual children may not fully acquire one of the linguistic systems deppending on the amount of input they are exposed to and on the social status of the languages that are being acquired. In cases of incomplete acquisition of one of the native languages, cross-linguistic influence and/or language loss may be oberved. Montrul (2010) examined transfer from English in L1 English learners of Spanish and heritage speakers of Spanish living in the U.S. She used an oral narrative task and an acceptability judgment task to test participants' knowledge of clitics and other aspects of object expression in Spanish. Her findings show that grammatical transfer from English affected both L2 learners and heritage speakers of Spanish; however, the two groups

were affected in different ways, probably due to differences in language acquisition and patterns of language use.

Cross-linguistic influence also affectes the L1 of speakers who were raised monolingually but have been living in the L2 environment for a long period of time. These are cases of people who do not only go to live in another country, but have very little or no contact with people who speak their native language. In these situations, research has shown that some aspects of the L1 grammar may attrite and converge to L2 grammatical options (see Pavlenko 2000, and studies published in Cook 2003 for an overview about influences of one's L2 on L1).

As for the acquisition of an L2, after decades of research in SLA there is evidence that language transfer is a crucial phenomenon to understand any process of language acquisition in which more than one language is involved. Nevertheless, results are still conflicting and there is a range of positions on the role of cross-linguistic influence and UG accessibility within the UG paradigm. White (2003) mentions five approaches; four of which consider that there is some degree of language transfer in the acquisition of non-native languages: 1) full transfer/partial access,[39] 2) no transfer/partial access, 3) full transfer/full access (FT/FA), 4) partial transfer/full access, and 5) partial transfer/partial access.

Within the no-transfer account, the Full Access Hypothesis suggests that there is no transfer from the L1 and UG alone is involved in L2 acquisition. Thus, the learner

[39] For White partial access means that only UG principles and parameters as instantiated in the L1 constrain L2 acquisition, whereas the unused options of UG cannot be activated.

initially creates an interlanguage grammar drawing on UG options. This means that L2 acquisition mirrors L1 acquisition and that L2 learners can have a final state grammar that is very similar to the final state grammar of native speakers of the target language. On the other hand, within the transfer accounts, differences between full transfer and partial transfer are related to the question of what is transferable. Within the partial transfer account, Vainikka and Young-Scholten (1996) propose that only lexical categories and their linear orientation are transferred to the L2 initial state but functional projections are absent, whereas Eubank's (1993) Weak Transfer Hypothesis states that lexical and functional categories are transferred but values associated with functional categories are not. After the initial state the learner constructs the interlanguage grammar on the basis of L2 input and UG. However, proponents of partial access accounts advocate that UG constrains L2 acquisition only via L1 instantiations and L2 final state grammar is predicted to diverge from the final state grammar of native speakers, as in the Fundamental Difference Hypothesis formulated by Bley-Vroman (1990).

On the contrary, according to the FT/FA Hypothesis, L1 and L2 acquisition are fundamentally similar. L2 learners start the acquisition of the L2 with the steady-state grammar of the L1 (Schwartz & Sprouse 1994, 1996). Therefore, the interlanguage grammar at the initial state is identical to the L1 grammar. Restructuring of the interlanguage grammar towards the grammar of the target language follows from the interaction between the L2 input and access to UG. Yet, even though UG fully constrains the acquisition of an L2, L2 grammars may, but not always will converge on the target grammar (Schwartz & Sprouse 1994, 1996). Schwartz and Sprouse (1994)

show empirical evidence that FT/FA can explain L2 acquisition. They analyze word order in the acquisition of German by a Turkish native speaker. Spontaneous production data were collected longitudinally, over a period of 26 months. When analyzing different stages of development, the authors found that at stage 1 the learner had essentially the L1 Turkish grammar with some small effects of the L2 input. Further changes motivated by the L2 input and UG based could be identified in stage 2 and 3. However, at stage 3 the learner's grammar was still distinct from that of the L2 and the authors predicted that those aspects that have not converged to the target language grammar at that point would be subject to fossilization.

Montrul (2000) investigated the role of UG and L1 knowledge in the acquisition of causative/inchoative alternation by L2 learners of Turkish, Spanish and English. She found L1 influence only at the morphological level and UG-guided development at the lexico-syntactic level. She claims that her findings support the FT/FA Hypothesis but they also indicate that UG and the L1 operate at different levels of linguistic structures and reconfiguration occurs at different stages of development; which means that transfer is subject to modularity in Interlanguage grammars.

Although there are not many studies in L3 acquisition that have particularly tested these approaches, partial and full access models to L2 acquisition indirectly make predictions for the L3 acquisition initial state (García Mayo 2012). Whereas partial access models predict that transfer of morphosyntactic features can come exclusively from the L1, full access models claim that transfer may come from both the L1 or the L2.

Finally, language transfer seems to be related to language activation in the mind of the speaker. Studies have demonstrated that there is lexical (e.g. Spivey & Marian

1999, Colomé 2001 among many others) as well as syntactic priming (e.g. Loebell & Bock 2003, Hartsuiker et al. 2004) across languages. That is, recent use of a word or a structure in one language affects the word and structure choice in another language. This indicates that the representation of different languages is integrated and one language may affect the other in both production and comprehension. Although the activation of more than one linguistic system in the mind of a bilingual speaker has been demonstrated only when one language is used right after another or when two languages are used simultaneously, it may as well happen even when only one of the languages is being used. If, as suggested by the findings of Bock and Griffin (2000), priming can be explained as a form of implicit learning rather than a transient memory activation mechanism, it is reasonable to claim that simultaneous and repeated activation of more than one linguistic system in the mind of bilinguals may lead to cross-linguistic influence at the representation level. Loebell and Bock (2003, p.796), for instance, ague that "common structures from bilingual's known languages may have a common psycholinguistic substrate, so that structurally similar forms are created in procedurally similar ways."

In sum, cross-linguistic influence in bilingual speakers has been attested using different research methodologies and from different theoretical approaches. Research on L3 acquisition within the generative perspective that has focused on language transfer will be further discussed in the next Section.

### 4.3.3. Language transfer in L3 acquisition: the role of previously acquired languages

When cross-linguistic influence is examined from the perspective of L3 acquisition, scholars are concerned especially with the source of transfer in different linguistic levels: phonology, phonetics, lexis, morphosyntax, semantics, etc. Some authors find that the L1 and the L2 are activated in L3 production but L1 transfer and L2 transfer are not manifested in the same way or to the same extent (Bouvy 2000, Hammarberg 2001, Ringbom 2001). The L2 may have a more relevant role in lexical transfer, whereas syntactic transfer would come preferably from the L1, or at least presupposes high L2 proficiency (Ringbom 2001). Bouvy (2000), pointing in the same direction, claims that L2 transfer is more a compensatory performance phenomenon and does not affect the L3 interlanguage grammar, whereas transfer from the L1 occurs at the structure level.

Among the authors who argue that the L1 is the language that affects the most the acquisition of grammatical aspects of the L3, interestingly there are different works focusing on the acquisition of null and/or overt pronouns. Lozano (2002) looked at the acquisition of null and overt subjects in L2 and L3 Spanish and Jin (2009) examined L3 acquisition of null objects in Norwegian, and both found persistent L1 influence. Jin (2009) argues that the L1 is the main source of transfer as far as syntax is concerned. Na Ranong and Leung (2009) examined the acquisition of null objects by L2 and L3 learners of Chinese and also found that the L1 plays a privileged role in both L2 and L3 acquisition, regardless of typological proximity.

On the other hand, there are studies on both lexical (Hammarberg 2001, De Angelis & Selinker 2001, Cenoz 2003) and syntactic (e.g. Bardel & Falk 2007, Bohnacker 2006, Falk & Bardel 2011, Flynn et al. 2004, Flynn 2009, Jaensch 2011, Leung 2005) cross-linguistic influence showing that the L2 plays an evident role in the acquisition of the L3. De Angelis and Selinker (2001) argue that this is because learners do not want to sound as if they were speaking their own language and this is why they tend to transfer more from the L2. Williams and Hammarberg (1998), in addition to suggesting that learners rely more on the L2 when learning an L3 because they want to suppress the L1 as being a 'non-foreign' language, claim that the same acquisition mechanisms used when the L2 was acquired are reactivated in the acquisition of an L3, as opposed to the mechanisms used to learn the L1.

Yet, among this group of scholars there are also different points of view on what is the actual role of the L2 when learning an L3. According to Flynn, Foley and Vinnitskaya (2004), and their Cumulative-Enhancement Model, all previously learned languages will positively affect the acquisition of any subsequent language or remain neutral. Although there are other studies on L3 acquisition of morphosyntactic aspects that also find that both the L1 and the L2 can influence the acquisition of the L3, their findings show that transfer has positive as well as negative effects on the construction of the L3 interlanguage grammar (Bohnacker 2006, Chin 2009); which partially contradicts the Cumulative Enhancement Model. Furthermore, Flynn (2009), who claims that her findings suggest that experience in any prior language can be drawn upon in subsequent language acquisition, also state that her results are compatible with the idea that transfer comes mainly from the last learned language. This is precisely what is

proposed by the L2 Status Factor hypothesis (Bardel & Falk 2007, Falk & Bardel 2010, Falk & Bardel 2011), which maintains that morphosyntactic transfer, either positive or negative, will come preferably from the most recently acquired language, independently of typological similarity or genetic relatedness, and the L2 can block access to morphosyntactic properties that may be transferable from the L1 system. According to the authors, this process can be explained by the similarities between L2 and L3 acquisition: age of onset, learning situation, learning strategies, metalinguistic awareness and awareness in the language learning process. In addition, De Angelis (2005) proposes the existence of two interacting factors that block native language influence in favor of transfer from a non-native language: perception of correctness and association of foreignness. Because L1 information is perceived as incorrect from the start, learners tend to transfer non-native words into the target language. Association of foreignness refers to a cognitive process in which foreign languages are usually perceived to be closer to each other than to the native language. Falk and Bardel (2011) looked at the acquisition of placement of object pronouns in German by two groups of intermediate level learners: L1 French-L2 English and L1 English-L2 French speakers. The two groups behaved differently and the fact that English and German belong to the Germanic family did not play a role in language transfer. Rothman and Cabrelli Amaro (2010) also found evidence in support of the L2 Status Factor when they analyzed the acquisition of properties of the Null Subject Parameter in L3 French and L3 Italian by L1 English-L2 Spanish speakers. However, because transfer came mainly from Spanish, unlike in the previous study, the authors considered that psychotypology –or even genetic relatedness– may have played a role in determining the main source of transfer.

Finally, Jaensch (2011) investigated the acquisition of German adjectival inflection by L1 Japanese-L2 English speakers and did not find clear transfer from the L1 nor from the L2, which led the author to conclude that neither the Cumulative-Enhancement Model nor the L2 Status Factor could account for the results.

### 4.3.4. Other factors affecting cross-linguistic influence in L3 acquisition

Besides order of acquisition, there are at least two other factors that seem to determine the influence of prior linguistic knowledge in the acquisition of the L3: (perceived) linguistic proximity between the source and the target language and proficiency in the source and the target language.

Linguistic proximity has been found to be an influential factor in determining the source of cross-linguistic influence of morphosyntactic and semantic properties (Salaberry 2005, Carvalho & Silva 2006, Bayona 2009, Foote 2009, Rothman 2010, 2011, Montrul et al. 2011, Ionin et al. 2011). These studies find that learners tend to transfer more from the language that is structurally closer to the language they are learning, regardless of whether it is the L1 or the L2. In addition, other studies find that the language that is perceived as typologically closer by the learners —what Kellerman (1983) called psychotypology— has also an effect on cross-linguistic influence (Angelis & Selinker 2001, Cenoz 2001, Singleton & O' Laoire 2006). Rothman formalizes the role of psychotypology in cross-linguistic influence in the Typological Primacy Model:

> Initial State transfer for multilingualism occurs selectively, depending on the comparative perceived typology of the language pairings involved, or psychotypological proximity. Syntactic properties of the closest (psycho)typological language, either the L1 or L2, constitute the initial state hypotheses in multilingualism, whether or not such transfer constitutes the most economical option. (Rothman 2011, p.112)

In a later version, García Mayo and Rothman (2012) highlight that either typological proximity or perceived typological proximity constrains cross-linguistic influence. At the initial state of L3 acquisition, transfer will come exclusively from the language that the parser selects as the typologically closer to the target language, regardless of order of acquisition.

SLA research had already shown that similarities and/or differences between languages play an important role in facilitating or hindering processes of transfer. The body of research produced in the last twenty years shows that transfer is more likely to happen when the L1 and the L2 are similar, although transfer can also occur when no perceived similarity is involved (Kellerman 1995). But what does exactly mean to say that two languages are similar or different? Although many scholars in the field of L3 acquisition have been arguing that typological or psychotypological proximity plays a crucial role in cross-linguistic influence, there is not a consensus about the definition of these terms. Furthermore, typology and psychotypology have been either considered undistinguishable from one another or it has been assumed that learners' perception of linguistic proximity corresponds to objective similarities between languages. Finally, psychotypology has not been directly investigated, that is, on the best of my knowledge learners have not yet been tested on how similar or different they perceive the languages they know to be. When learners' perception of linguistic proximity has been used as a possible explanation for language transfer, researchers had to assume that their participants perceived one pair of languages as more similar than the other pair. This kind of assumption has been made because genetic relatedness between languages usually overlaps with perceived similarity. However, it is necessary to

consider that this is not always the case and perceived similarity is fuzzier, broader in scope and presents more variation when compared with objective language similarity (Ringbom 2007).

Therefore, before assuming that the learners' perception of distance between languages and the objective distance between languages that linguists can measure and describe are identical, the following aspects must be considered. First, when two languages are typologically or genetically similar and learners start to notice that these languages share some formal features, they often assume additional similarities that have not been perceived (Ringbom 2007, Ringbom & Jarvis 2009). This is why processes of transfer may be due to learners' perception of similarity and may be also a consequence of assumed similarities that have not been noticed in the input or taught in the classroom. This process is even more frequent when two languages are genetically and typologically similar in many aspects, like Spanish and Portuguese or Swedish and Norwegian. In these cases, learners cross a crucial similarity threshold and over-assume similarities that have been never perceived (Ringbom & Jarvis 2009), which leads to a higher degree of influence of one of the languages in their production and comprehension in the other language.

A second aspect that is worth mentioning is that learners rely only on certain features and not on others when estimating language distance, depending on how specific or neutral they consider the structure to be (Kellerman 1978, 1983). Furthermore, form and meaning are not equally relied upon when contrasting and/or seeking for similarities between languages. Ringbom (2007) and Ringbom and Jarvis (2009) propose three different levels of transfer that follow from learners' reliance on

perceived and/or assumed cross-linguistic proximity: 1) item transfer, 2) system transfer or procedural transfer, and 3) overall transfer. Transfer at the item level is based on the perception that two items are similar in form combined with the assumption of similarity of function or meaning. This kind of transfer happens more often at the earlier stages of development and it can have either negative or positive effects. System transfer or procedural transfer happens when abstract principles of organizing information are transferred. This kind of transfer comes predominantly from the L1 or from an L2 in which the learner has a high proficiency level. The overall transfer is a combination of both item and system transfer and it depends on learners' overall impression about the distance among the languages the learners know.

A third factor that distinguishes perceived language distance from actual language distance is that the latter is always symmetrical (being equal from language A to language B and vice versa), whereas the former may have a stronger effect in one direction than in the other (Ringbom 2007). For instance, it is very common to hear from Brazilian Portuguese speakers learning Spanish that it is not difficult to understand what Spanish speakers say after a short period of exposure to the language. This is not true for Spanish speakers learning Portuguese, who state that it is easy to understand written Portuguese but it takes more time of exposure and/or instruction for them to start understanding spoken Portuguese. Differences in phonological and phonetic aspects of these two languages make the perception of language distance from Spanish to Portuguese to be bigger than from Portuguese to Spanish when it comes to the comprehension of spoken language.

Finally, perceived distance between languages is highly susceptible to change as the learner's experience and proficiency in the target language increases (Kellerman 1979). The more the learner knows about the target language the more accurate she is going to be on her perception about similarities between the target language and any other previously acquired language. It is expected that assumed similarities decrease whereas perceived similarities increase with the increase in amount of input and received instruction, which should lead to more positive transfer than negative transfer. Nevertheless, the effects of positive transfer in advanced level students are very difficult to be empirically tested. As Ringbom (2007) points out, only negative transfer is immediately visible to the researcher because positive transfer always leads to and cannot be distinguish from successful acquisition of the target language.

In summary, because perceived or assumed similarity is a psycholinguistic construct that happens in the learner's mind, whereas the actual similarity between languages depends on objective analyses done by linguists, perceived and objective linguistic proximity cannot be considered as one and the same thing when investigating or discussing cross-linguistic influence in language acquisition. Moreover, even when the discussion is restricted to typological proximity, it is not entirely clear what L3 researchers mean by claiming that transfer comes preferably from the language that is typologically closer to the target language. There is little agreement among linguists on how to measure linguistic proximity across languages. On the one hand, languages can be classified according to specific structural similarities and differences. Within the generative approach cross-linguistic comparisons are mostly based on linguistic parameters and classifications usually cut across language families (e.g. Spanish,

Russian, Basque, Chinese and Arabic are just a few examples of null-subject languages that belong to unrelated language groups). On the other, languages can be classified according to their relatedness or genetic affiliation. Languages that belong to the same family (e.g. Indo-European languages) or to the same branch within a large family (e.g. Romance, Slavic, Germanic) may or may not share lexical, morphosyntactic and phonological properties. Likewise, two languages that are not genetically related may be typologically similar depending on the structural aspect under consideration. This means that typological proximity between two languages does not necessarily imply that there is a genetic relation between them and vice versa. Due to the lack of precise definition of concepts such as psychotypology and typology, and to avoid confusion, languages will be described as genetically related when they belong to the same language family or branch, and typological proximity will be used as a synonym of structural similarity. That is, typological proximity between languages will not refer to an overall or holistic similarity, but to a similarity in specific grammatical features or components. In addition, to refer to the learners' perceptions and assumptions about the distance between languages, I will use psychotypology or psycholinguistic distance interchangeably and with no difference in meaning.

English, Spanish and Portuguese, which are the three languages under consideration in this study, are all Indo-European languages, but whereas English is a Germanic language, Spanish and Portuguese are Romance languages. Spanish and Portuguese are not only genetically related with a great number of cognates similar in both form and meaning, but they also share many phonological, semantic and morphosyntactic properties. Yet, BP has been undergoing processes of parametric

change and reanalysis in subject expression (Duarte 1993, Duarte 2000), object expression (Cyrino 1993, Cyrino 1997, Pagotto 1993), the fixing of word order towards SVO constructions in declarative and interrogative sentences (Berlinck 1988, Duarte 1992), the weakening of the agreement system (Galves 1993), among others[40]; which moves BP away from other Romance languages and makes it more similar to English in a variety of grammatical areas. If morphosyntactic transfer is more influenced by a general perception of similarity between languages, it is more likely that L3 Portuguese learners who already know Spanish and English will perceive Portuguese and Spanish as more similar, and will probably over-assume similarities that have not been perceived. This may cause transfer of morphosyntactic properties from Spanish into the Portuguese interlanguage grammar. Part of the structures transferred from Spanish will have a positive effect and facilitate the process of language acquisition. Nevertheless, there may be also negative transfer in the areas in which BP is changing and moving away from other Romance languages or in linguistic phenomena in which Spanish and BP differ from each other.

On the other hand, if morphosyntactic transfer is more influenced by the perception of similarity between specific structures and linguistic properties, it is more likely that these L3 learners of Portuguese will transfer from English and from Spanish, depending on the linguistic level and property. If the structure and its meaning is more similar to Spanish, transfer will come from Spanish and if it is more similar to English, transfer will come from English. In this case, transfer would be more influenced by the

[40] See Tarallo (1993) for a review of on related processes of language change that happened in BP grammar between the 19th and the 20th centuries.

perception of specific linguistic aspects than by the over-assumption of proximity, which should lead to more positive than to negative transfer. In previous studies in which the acquisition of L3 Portuguese was analyzed learners relied more heavily on Spanish or other Romance language than on English when producing, interpreting and judging sentences in Portuguese (Salaberry 2005, Carvalho & Silva 2006, Montrul et al. 2009a, Montrul et al. 2009b, Rothman 2010, 2011, Montrul et al. 2011, Ionin et al. 2011, Ionin et al. in press). Even when BP presents typological similarities with English in the linguistic phenomenon under investigation, transfer comes preferably from Spanish (Rothman 2010, Ionin et al. 2011), which indicates that genetic affiliation or a general perception/assumption of linguistic proximity seems to play a more relevant role than typological proximity alone.

Rothman (2010) analyzed the acquisition of word order in declarative and interrogative sentences and relative clause attachment preference by L3 learners of Portuguese. Despite the similarity between English and BP in these syntactic domains, Spanish was the main source of transfer for both groups: L1 Spanish/L2 English and L1 English/L2 Spanish speakers. Ionin, Montrul and Santos (2011) looked at what transfers in the acquisition of plural NP interpretation in L3 BP by L1 English/L2 Spanish speakers and a small group of L1 Spanish/L2 English speakers. BP uses both bare plural NPs (*Tigres comem carne* 'Tigers eat meat'), like English, and definite plural NPs (*Os tigres comem carne* 'The tigers eat meat')[41], like Spanish, to express generic readings. That is, BP combines the properties of Spanish and English. Although

[41] Even though this sentence would refer to a specific group of tigers in English, in BP, as well as in Spanish, it can refer to tigers in general.

transferring from both previously acquired languages would lead learners to a target-like interpretation of plural NPs, learners treated BP just like Spanish. These two studies show that a general perception of similarity between Spanish and Portuguese seems to play a more relevant role in language transfer than a typological similarity in either the semantic or the syntactic domains.

Nevertheless, (perceived) language distance does not affect language transfer alone. As previously mentioned, there are at least two other factors that may interact with perception of language distance to affect cross-linguistic influence: proficiency in the source and the target language and order of acquisition. Whereas some of the studies on L3 BP found that transfer comes exclusively from Spanish (Carvalho & Silva 2006, Rothman 2010, 2011), transfer from English was attested among English native speakers in different linguistic phenomena (Montrul et al. 2009a, Montrul et al. 2011, Ionin et al. in press). Montrul, Dias and Santos (2009) used a written grammaticality judgment task to look at whether L3 BP learners transferred two properties assumed to be related to the Null Subject Parameter –clitic climbing and the *that-t* effect. Clitic climbing and extractions with complementizers (the *that-t* effect) are grammatical in Spanish, a pro-drop language, but ungrammatical in English, a non pro-drop language. In BP extractions with complementizers are still grammatical but clitic climbing is no longer available. Their results showed that the L1 Spanish group transferred from Spanish, whereas the L1 English group transferred from both Spanish and English. Montrul, Dias and Santos (2011) also looked at the acquisition of object expression in BP by similar groups of BP learners. In a story-telling task, they found that both L1 English and L1 Spanish speakers made errors that could be traced back to Spanish (e.g.

production of differential object marking, clitic climbing and clitic doubling). However, the L1 English group also produced significantly more strong pronouns in object position than the L1 Spanish speakers and the BP native speakers, which could be attributed to transfer from English. Ionin, Grolla, Montrul and Santos (in press) found facilitating transfer from English among L1 English speakers in a follow-up study on NP interpretation in L3 BP. As mentioned above, English expresses generic readings via bare plural NPs, Spanish does so using plural NPs with definite articles and BP allows both options. When rating sentences with subject NPs with and without articles, both groups of learners –L1 English/L2 Spanish and L1 Spanish/L2 English speakers– rated definite plural NPs higher than bare plural NPs, which can be attributed to transfer from Spanish. Nevertheless, the L1 English speakers were more target-like than the Spanish native speakers because they gave higher ratings to bare plural NPs, which indicates that English helped the L1 English speakers but did not help the L1 Spanish speakers who also know English as an L2. In summary, these studies show that learners' perception of language proximity is a strong factor at predicting both negative and positive cross-linguistic influence at the morphosyntactic and semantic levels. However, part of these studies also shows that the L1 also seems to play a role in processes of language transfer, even when the L2 and the L3 are closely related languages.

Regarding proficiency in the L2, studies investigating the acquisition of different morphosyntactic aspects in multilinguals with different language combinations found that the higher the level of proficiency in the L2, the higher the degree of influence of the L2 in the acquisition of the L3 (Salaberry 2005, Bayona 2009, Jaensch 2009). Moreover,

as already mentioned, proficiency in the L2 as well as in the L3 affects the way learners perceive and assume similarities between the two languages.

## 4.4. Summary

In summary, there are many questions in the emerging field of generative multilingual acquisition that deserve further research. For instance, it is not clear yet what is the source of language transfer in L3 acquisition and whether it differs depending on the linguistic level (e.g. lexical, morphosyntactic, semantic) that is being considered. In addition, regarding more specifically the role of (psycho)linguistic similarity in cross-linguistic influence, it still remains to be tested what type of perception learners have about similarities and differences among the languages they know and/or are studying, whether and how this perception affects processes of language transfer and how perception of language distance interacts with factors such as order of acquisition, proficiency in the non-native languages, among others. Investigating in depth these and other key questions related to cross-linguistic influence will not only add to a better understanding of L3 acquisition itself, but will also shed light on the debate of what variables determine language transfer in non-native language learning and use in general.

The present study addresses the role of cross-linguistic influence in the acquisition of BP as an L3 in order to find out which of the previously known languages –English or Spanish– play a more relevant role in language transfer and which factors can better account for processes of cross-linguistic influence: order of acquisition or (perceived) language proximity.

This will be done by analyzing the acquisition of properties related to the dative alternation in BP by a group of L1 English/L2 Spanish and a group of L1 Spanish/L2 English. The dative alternation is a linguistic phenomenon that is present in the three languages under investigation, with different properties in each language. As discussed in Chapter 2, some properties of the dative alternation in BP are more similar to the morphosyntax and use of datives in Spanish, whereas in other aspects BP resembles more English. This makes this linguistic phenomenon ideal to test whether transfer comes primarily from English or from Spanish and which linguistic aspects are transferred from each of these two languages. The learners' proficiency level in the L2 and the L3 and their perception of language distance between Spanish and Portuguese and English and Portuguese will also be measured and analyzed.

In Chapter 5, properties of the dative alternation in the three languages under investigation will be compared and summarized. Then, a review of studies on the acquisition of English double object constructions and the acquisition of Spanish dative constructions by native speakers of English will be presented. Finally, the profile of the participants, the methodology used and the obtained results of the study with L3 BP learners will be presented.

# Chapter 5:

# L3 acquisition of BP dative alternation

## 5.1. Introduction

This Chapter presents an experimental study testing knowledge of the dative alternation in learners of BP as an L3 and potential sources of language transfer in their interlanguages. The theoretical foundations for this study were laid out in the previous Chapter.

The dative alternation is a linguistic phenomenon present in the three languages that are part of this study: English, Spanish and Portuguese, but it has different properties in each of these languages, as described in Chapter 2. The differences found in grammatical encoding and syntactic and semantic restrictions of DOCs in English, Spanish and Portuguese, make this linguistic phenomenon ideal to test cross-linguistic influence in the L3 acquisition of BP by learners who already know English and Spanish.

As mentioned in Chapter 2, English, Spanish and Portuguese allow POCs (V DP PP) with verbs that have two internal arguments, as illustrated in (79), (80) and (81).

(79) John gave the book to Mary. (English POC)

(80) Juan dio el libro a María. (Spanish POC)
'Juan gave the book to María.'

(81) O João deu o libro para a Maria. (Portuguese POC)
'João gave the book to Maria.'

These three languages also have an alternative possibility for realizing these arguments, and although these alternative structures look different in the surface, they

can all be interpreted as DOCs. In English DOCs, the indirect object appears before the direct object and receives accusative case, as in (82). In Spanish the word order is flexible and the direct object usually appears before the indirect object. In addition, the indirect object is introduced by the dative case marker "*a*" and is doubled by a dative clitic, as exemplified in (83). BP shares with Spanish the possibility of expressing the indirect object by a dative clitic, as shown in (84), but clitic doubling is not allowed, and the dative case marker is also absent of the BP morphosyntactic system.

(82) John gave Mary the book. (English DOC)

(83) Juan le dio el libro a María. (Spanish dative construction)
Juan DAT CL-3s gave the book DAT case marker María
'Juan gave María the book.'

(84) O João me deu o libro. (Portuguese dative construction)
the João DAT CL-1s gave the book
'João gave me the book.'

With respect to the usage of the constructions that participate in the dative alternation, Spanish allows DOCs with indirect objects that have a variety of semantic roles, with animate as well as inanimate indirect objects and with a greater variety of verbs, including unaccusative and stative verbs. BP and English are more restrictive with the kinds of indirect objects and verbs that can appear in DOCs. These two languages use exclusively POCs when the indirect object is inanimate or has the semantic role of possessor, and with unaccusative and stative verbs. Therefore, it seems that BP and English are more similar to each other than BP and Spanish in the restrictions related to the use of DOCs and in choosing POCs in contexts in which Spanish speakers prefer to use DOCs.

Table 13 summarizes the properties related to the dative alternation in English, Spanish and BP. This table shows that clitic doubling and the presence of a dative case marker are morphosyntactic properties only found in Spanish. Therefore, if the L3 learners of BP ever accept or use these constructions in Portuguese, this means that they may be transferring from Spanish to Portuguese. On the other hand, the English-type DOC (V DP DP) is only possible in English, and if the learners of L3 BP accept and produce this construction in Portuguese it can be interpreted to mean that they are transferring from English. Moreover, if the L3 BP learners produce or accept DOCs when the indirect object of the sentence has the role of possessor, it may also suggest they are transferring properties from Spanish.

*Table 13: Properties of English DOC and Spanish and BP dative constructions*

| | Spanish | English | BP |
|---|---|---|---|
| **Dative clitics** | ✓ | ✗ | ✓ |
| **Dative case marker** | ✓ | ✗ | ✗ |
| **Clitic doubling** | ✓ | ✗ | ✗ |
| **Unaccusative and stative verbs** | ✓ | ✗ | ✗ |
| **V DP DP** | ✗ | ✓ | ✗ |
| **Restriction on person** | ✗ | ✗ | ✓ |
| **Semantic roles** | goal, source, bene-factive, possessor | goal and benefactive | goal, source and benefactive |

Finally, as argued in Chapter 3, the results of experimental tasks completed by BP native speakers indicate that the BP dative alternation is under a process of language change and POCs are becoming the preferred option in most contexts. Third person datives are still accepted in written language but are rarely produced in oral

discourse by BP native speakers. On the other hand, 1st and 2nd person datives are still frequently produced in oral discourse, but only when the indirect object is the goal of the direct object. In addition, data from BP native speakers showed variability in acceptability and production. Considering differences between formal and colloquial register and individual variability in the use of dative clitics, L3 BP learners may be exposed to variable input. This will certainly affect and may even delay the process of language acquisition.

Considering the possibilities mentioned above, the goal of this study is to look at whether L3 learners of Portuguese who already know Spanish and English transfer properties of either of these two languages. In the remainder of this chapter I will first review previous work on the L2 acquisition of properties related to the dative alternation in any of these three languages. Second, I will present the goals, hypotheses and predictions of the present study. Third, I will describe the participants and the methodology used and, finally, I will describe the results of each task followed by a brief discussion. A more detailed and extensive discussion followed by the conclusions will be presented in Chapter 6.

## 5.2. L2 acquisition of properties related to the English and the Spanish dative alternations

The intention of this Section is to look at what previous research have found about the L2 acquisition of properties of the English and the Spanish dative alternations. Ideally, I want to focus on studies that have investigated cross-linguistic influence of properties of the dative alternation and on studies that included L1 English speakers

learning Spanish and/or vice-versa. These studies can provide information on whether transfer of properties of the dative alternation has been previously attested, and whether L1 English speakers can acquire properties of Spanish DOCs and L1 Spanish speakers can acquire properties of English DOCs.

Because the dative alternation is a linguistic phenomenon present in many languages with different properties, its L2 acquisition has been studied with a variety of language combinations. The majority of the studies on the acquisition of the English dative alternation were conducted with native speakers of Japanese, Korean or Chinese (Sawyer 1996, Inagaki 1997, Whong-Barr & Schwartz 2002, Oh & Zubizarreta 2005). Studies on the acquisition of the English dative alternation that included native speakers of Romance Languages, among other languages, are Davies (1994) and Mazurkewich (1984). Participants in Davies' (1994) study had a variety of L1s, including Italian, French and Spanish. These are languages that have POCs, but do not allow English-type DOCs. The results of a grammaticality judgment task showed that many Romance language speakers did not accept English-type DOCs at all, whereas others accepted them only with some verbs but not with others. Mazurkewich (1984) focused on the acquisition of the English dative alternation by L1 French and L1 Inuktitut (Eskimo) speakers. Her experimental task consisted of a grammaticality judgment task with POCs and licit and illicit DOCs. Regarding the results of the L1 French group, beginner and intermediate learners were native like in their ratings of POCs but had difficulty with English DOCs. Advanced learners, on the other hand, did accept both POCs and DOCs and were capable of distinguishing between grammatical and ungrammatical DOCs. The author concluded that L2 learners gain control of the alternation only over time.

Unfortunately, to the best of my knowledge there are not studies on the acquisition of the English dative alternation that focus exclusively on Spanish native speakers.

As for the acquisition of the Spanish DOCs, there are at least three studies that are worth mentioning: Bruhn de Garavito (2000), Perpiñán and Montrul (2006), and Cuervo (2007). Bruhn de Garavito (2000) used a grammaticality judgment task to test advanced and near-native English-speaking learners of Spanish. She found that native speakers of English transfer properties of English DOCs to Spanish and do not accept dative constructions when the indirect object is [–human]. Perpiñán and Montrul (2006) used a preference judgment task, which consisted of judging the suitability of a sentence within the context of a short narrative, to test low-intermediate and high-intermediate to advanced English-speaking learners of Spanish. They found that low-intermediate learners accepted ungrammatical constructions in Spanish that resemble English DOCs. Cuervo (2007) also tested native speakers of English who were enrolled in Spanish intermediate classes. The results of a grammaticality judgment task showed that the L2 Spanish learners did not accept dative constructions when the indirect object had the role of possessor or was inanimate. Although these studies still show that there is transfer from English when acquiring Spanish DOCs, the results of all three studies also indicate that L2 learners of Spanish evidence subtle analysis of morphosyntactic properties of the Spanish dative alternation.

There are also other studies that have attested transfer in the acquisition of properties of the dative alternation (White 1987, 1991, Whong-Barr & Schwartz 2002, Oh & Zubizarreta 2005). White (1991) investigated the acquisition of French by L1 English children and the acquisition of English by L1 French children. White focused on

grammatical aspects in which these languages differ only partially, including the acquisition of DOCs. That is, the L1 and the L2 have overlapping sentence types but the L1 also allows structures that are not present in the L2 and vice versa. White's results confirm that in cases of partial overlapping the learner is more likely to assume, based on information from the input, that the two languages share similar constructions. This is precisely the case of the dative alternation when many language combinations are considered, and more specifically, it is the case of English, Spanish and Portuguese. These three languages allow POCs but differ in the morphosyntactic restrictions and the grammatical encoding of DOCs. This may lead learners to transfer properties from either English or Spanish DOCs into Portuguese.

## 5.3. The present study

The purpose of this study is to investigate the acquisition of morphosyntactic and semantic properties of the dative alternation in BP by L1 English/L2 Spanish and L1 Spanish/L2 English adults. The following research questions will be addressed:

1) Are L3 BP learners sensitive to morphosyntactic and semantic restrictions related to the dative alternation in BP?

If learners are sensitive to morphosyntactic and semantic restrictions, they will be able to master properties of the dative alternation in BP and correctly judge and use POCs and DOCs, making the correspondent distinctions related to person and to the semantic role of the indirect object.

2) Do L3 BP learners transfer properties from either English or Spanish to BP?

If cross-linguistic influence from either English or Spanish occurs, learners will show specific types of errors. If transfer comes from Spanish, learners will accept and use more dative clitics and a-DPs with all types of arguments (goal, source, benefactive and possessor) than BP native speakers will. They will also accept and produce clitic doubling constructions, which are ungrammatical in BP. Because dative constructions are more frequently used in Spanish than POCs and they are restricted to specific contexts in BP, if transfer comes from Spanish learners will behave more like BP native speakers when 1st person indirect objects have the semantic role of goal. On the other hand, if transfer comes from English, learners will accept dative clitics at a lower rate than BP native speakers, especially for 1st person arguments that have the semantic role of goal; but they will accept and use more constructions with two DPs —English-type DOCs— with indirect objects that have the roles of goal and benefactive. Because POCs are very productive in English and BP, and DOCs are not possible when the indirect object is not the intended recipient of the direct object, if transfer comes from English, learners may respond more like BP native speakers when the indirect object has the semantic roles of source and possessor and with third person indirect objects.

3) If transfer is observed, do order of acquisition and/or language proximity play a role in language transfer when learning an L3?

When observing transfer from one of the previously known languages, if order of acquisition drives processes of cross-linguistic influence, L1 English speakers and L1 Spanish speakers will show a different pattern of language transfer when judging and producing sentences in Portuguese. If transfer comes always from the L1, then English native speakers will transfer from English and Spanish native speakers will transfer from

Spanish. If the opposite pattern is observed, it is because transfer tends to come from the L2. If psychotypology matters, then transfer will come exclusively from the language that learners perceive as closer to Portuguese. Finally, if language typology plays a more relevant role in cross-linguistic influence, L1 English and L1 Spanish speakers will transfer from both languages because BP shares properties of the dative alternation with English (e.g. preference for POCs with source and possessor indirect objects) as well as with Spanish (e.g. use of dative clitics to express 1st person indirect objects with the role of goal).

*Table 14: Summary of predictions for research question #3*

| Source of transfer | L1 Spanish/L2 English | L1 English/L2 Spanish |
|---|---|---|
| **L1** | Spanish | English |
| **L2** | English | Spanish |
| **Typology matters** | Spanish and English | Spanish and English |
| **Psychotypology matters** | language perceived as closer to BP | language perceived as closer to BP |

### 5.3.1. Participants

Participants in this study were 24 BP native speakers,[42] 20 L1 English/L2 Spanish/L3 BP and 18 L1 Spanish/L2 English/L3 BP. The BP native speakers were all tested in Brazil. Among the 20 L1 English/L2 Spanish, 14 were tested in the US, four in Brazil, one in Germany and one in Spain. Among the 18 L1 Spanish/L2 English, 10 were tested in the US and the remaining eight were tested in Brazil. All participants answered a background questionnaire where they included detailed information about

[42] Detailed information about the profile of the BP native speakers can be found in Chapter 3, Section 3.2.1.

their previous linguistic experience. A total of 21 participants were tested in the L1 English/L2 Spanish group. One of them was eliminated from the analysis because he reported having been exposed to Spanish and English at home since birth. From the remaining 20 participants, there was another one who did not complete the picture description tasks. Her answers will be included in the description and analysis of the tasks that she was able to complete, which are the acceptability judgment task and the grammaticality judgment task. A total of 21 participants were tested in the L1 Spanish/L2 English group, but three were excluded from the analysis because they started being exposed to English before age 5. Regardless of being more dominant in the L1 or the L2, all early English/Spanish bilinguals or heritage speakers were excluded from the analysis so the role of order of acquisition could be analyzed more accurately. Finally, participants in all three groups were either college students or had a college degree. Many of them were highly educated and already had or were pursuing a doctorate degree at the time of testing.

Table 15 summarizes participants' age at the time of testing. A one-way ANOVA comparing the three groups showed that there is no significant differences in age among the three groups, $F(2,59) = 1.36$, $p = .26$.

*Table 15: Participants' mean age*

| **Groups** | **Age** |
|---|---|
| BP native speakers (n=24) | Mean = 25.92 (18 – 33) |
| L1 Spanish/L2 English (n=18) | Mean = 28.94 (20 – 45) |
| L1 English/L2 Spanish (n=20) | Mean = 25.95 (19 – 51) |

Regarding previous linguistic experience, all participants in the L1 English/L2 Spanish group reported that they spoke English at home and English was the main language of instruction from pre-school to college. All of them started learning Spanish before learning Portuguese. Furthermore, all but two participants said that Spanish was their L2. German and Hebrew were the two other L2s mentioned.[43] Other languages they studied before they started learning Portuguese were: French, Italian, German, Hebrew, Japanese, Catalan, Latin, Quechua, Esperanto, Arabic, Irish, Greek, Chinese and Dutch. All participants in the L1 Spanish/L2 English also stated that they spoke Spanish at home during childhood, although they come from different Spanish-speaking countries: 4 from Spain, 7 from Colombia, 4 from Puerto Rico, 1 from Argentina, 1 from Honduras and 1 from Mexico. English was the L2 of all of them and they started taking English classes in elementary school or later. Other languages that they reported having studied as well are: French, Italian, Latin and German. Table 16 shows age of acquisition of English (L2) for 17 of the 18 participants in the L1 Spanish/L2 English group, and age of acquisition of Spanish (L2) for 18 of the 20 participants in the L1 English/L2 Spanish group. An independent samples t-test comparing age of acquisition of the L2 showed that the difference between the two groups of learners was not significant, $t(33) = -1.69$, $p = .10$.

[43] Although Spanish was learned after these two participants have studied another non-native language, they will not be referred to here as their L3. Following the definition of L3 adopted in Chapter 4, L3 will refer exclusively to the language that is being currently acquired or used after having knowledge of at least two languages,

*Table 16: L3 BP learners' age of acquisition*

| Groups | AoA of the L2 |
|---|---|
| L1 Spanish/L2 English (n=17) | Mean = 9.88 (5 – 23) |
| L1 English/L2 Spanish (n=18) | Mean = 12.78 (5 – 20) |

With respect to the learners' proficiency in the L2, 17 of the 18 L1 Spanish speakers self-rated their proficiency in English and 18 of the 20 L1 English speakers self-rated their proficiency in Spanish. Learners used a nominal scale that included beginner, intermediate, advanced and near native. All L1 English speakers also completed a multiple-choice test in Spanish (40 points)[44] and all L1 Spanish speakers completed a multiple-choice test in English (40 points).[45] The self-rating and the cloze test were intended to establish the proficiency level of the participants in their L2. Table 17 shows self-ratings of both groups of learners in their L2 and proficiency test scores. An independent samples t-test comparing proficiency scores showed that there is no significant difference in L2 proficiency between the two groups of L3 learners, t(36) = –1.67, p .10.

[44] The proficiency test in Spanish consisted of a cloze passage and a multiple-choice grammar and vocabulary test from the Diploma de Español como Lengua Extranjera (DELE), Intermediate, May 2009 edition.

[45] The proficiency test in English consisted of a cloze passage adapted from Cornelius, E., Washburn, G, & O'Neill, R. 1981. American Kernel Lessons: Advanced Student Book. The same test was also used in Ionin, Montrul and Crivos (2013).

*Table 17: Learners' proficiency in the L2*

| Groups | Self-rating (number of participants) | | | | Proficiency test |
|---|---|---|---|---|---|
| | Beginner | Intermediate | Advanced | Near-native | Score (in %) |
| L1 Spanish/L2 English | 1 | 4 | 5 | 7 | Mean = 80.0% (43% – 98%) |
| L1 English/L2 Spanish | 0 | 3 | 6 | 9 | Mean = 86.9% (68% – 98%) |

Participants within the two groups of learners were also asked about their previous experience with Portuguese, how they learned it, and for how long. Among the the L1 Spanish/L2 English speakers, the learning period ranged from one semester up to three years. Furthermore, 10 participants reported having lived/studied in Brazil. The L1 English/L2 Spanish speakers had been learning Portuguese at the time of testing for a period that ranged from one semester up to 10 years, and eight of the participants had studied or worked in Brazil.

In addition to the proficiency test in the L2, all L3 BP also completed a proficiency test in Portuguese. It consisted of a multiple-choice cloze test (30 points), a multiple-choice vocabulary test (10 points) and a multiple-choice listening comprehension test (10 points). The listening comprehension test evaluated the comprehension of three short texts presented auditorily.[46] A one-way ANOVA on the proficiency test in Portuguese comparing the scores of the three groups indicated a significant difference among the groups, $F(2,59) = 18.75$, $p < .05$. The results of post hoc tests revealed that the scores of the BP native speakers differed significantly from the scores of the two

[46] The proficiency test in Portuguese was designed by the researcher. A similar version of this test, without the listening comprehension part, was also used in Montrul, Dias and Santos (2011) and Ionin, Montrul and Santos (2011).

learners groups, but the L3 BP groups did not differ from each other. Proficiency scores of the control group and the two experimental groups are displayed in Table 18.

*Table 18: Participants' scores in the proficiency test in Portuguese*

| Groups | Proficiency score (in %) |
|---|---|
| BP native speakers (n=24) | Mean = 94.2% (84% – 100%) |
| L1 Spanish/L2 English (n=18) | Mean = 79.6% (46% – 94%) |
| L1 English/L2 Spanish (n=18) | Mean = 79.3% (50% – 96%) |

### 5.3.2. Methodology

The two experimental groups, completed four experimental tasks in addition to the language background questionnaire and the proficiency tests: a grammaticality judgment task (GJT) and an acceptability judgment task (AJT), both in Portuguese, and two picture description tasks, one in Portuguese and another one in Spanish. The GJT and the AJT were untimed and were presented in written format; thus, they were more metalinguistic and tapped more into the learners' knowledge of written discourse. The picture description tasks, on the other hand, intended for learners to be less focused on prescriptive rules and more concentrated on conveying a certain meaning. The L3 BP learners also completed a language distance questionnaire. Tasks were completed in the following order. First, the L3 BP learners completed the AJT and the GJT. Then, they completed the language background questionnaire, the language distance questionnaire and the proficiency tests. After completing all the written tests and questionnaires, the researcher scheduled two recording sessions at least one week apart. In the first session the learner completed the picture description task in

Portuguese and in the second one the learner completed the picture description task in Spanish. The control group did not complete the language distance questionnaire, the English and the Spanish proficiency tests, or the picture description task in Spanish. The other tasks were completed in the same order by the BP native speakers. The experimental tasks will be described in more detail in Sections 5.3.2.1, 5.3.2.2, 5.3.2.3 and 5.3.2.4.

The language distance questionnaire included questions that intended to assess each group of learners' perception of the distance between English and Portuguese and Spanish and Portuguese regarding sounds, vocabulary and grammatical constructions. Therefore, the purpose of this questionnaire was to look at whether learners' perception of language distance depended on the native language of the learner and on the linguistic level that was being considered. The questionnaire was also designed with the goal of evaluating whether there is a relation between the learner's perception of distance between two languages and cross-linguistic influence from one language into the other. No study of L3 acquisition referring to psychotypology has ever measured this construct, so a test was specifically designed for this study.

Learners had to use a six-point Likert scale with a pair of opposing adjectives: similar and different, to evaluate distance between Spanish and Portuguese, and between English and Portuguese. The questionnaire had a total of 14 questions, 7 comparing Portuguese and English and 7 comparing Portuguese and Spanish. Questions were presented in a bilingual English/Portuguese version to all learners. A few items are presented below (see Appendix E for the full list of items included in the questionnaire).

| **Portuguese vs. English** | **Portuguese vs. Spanish** |
|---|---|
| - Portuguese language and English language are:<br>**similar** __ __ __ __ __ __ **different** | - The pronunciation in Portuguese and in Spanish is:<br>**similar** __ __ __ __ __ __ **different** |
| - Portuguese language grammar and Spanish language grammar are:<br>**similar** __ __ __ __ __ __ **different** | - Portuguese language vocabulary and Spanish language vocabulary are:<br>**similar** __ __ __ __ __ __ **different** |

#### 5.3.2.1. Grammaticality Judgment Task

The goal of the GJT was to test non-native speakers' basic knowledge of grammatical structures related to the dative alternation in BP (e.g. PPs and dative clitics). The GJT had a total of 48 sentences: 24 target items and 24 filers. Half of the sentences was grammatical and the other half was ungrammatical. Target items were divided into 6 different categories according to type of syntactic phrase, and person, with 4 test items in each category. Clitic doubling constructions (impossible in BP but possible in Spanish), and English-type DOCs (possible in English but impossible in BP), were specifically included in the GJT to test transfer from English and/or Spanish. All items had a verb with a direct object and an indirect object and the indirect object always had the semantic role of goal. Clitic doubling and English-type DOC appeared only in the 3rd person[47] whereas PPs and constructions with a dative clitic appeared in

[47] Clitic doubling and English-type DOCs appeared only in the 3rd person for different reasons. Clitic doubling with 1st person indirect objects always receives a contrastive focus interpretation in Spanish, as shown in (vi). As for the English-type DOC, it could not be included in the test because when translated into Portuguese the word order makes the sentence look exactly like the dative construction with a postsverbal dative clitic, as exemplified in (vii).

(vi) Me dio el libro a mí. (meaning: no a ti)
DAT CL gave the book DAT case marker me
'He gave ME the book (meaning: not you)

the 1st and the 3rd person. Table 19 shows the six categories of the GJT and a sample item within each category. Ungrammatical sentences are marked with an asterisk (see Appendix B for the full list of test sentences).

*Table 19: Categories and sample items of the GJT*

| Phrase type | Person | Example |
|---|---|---|
| PP | 1st p | Meu marido deu um buquê de flores para mim.<br>'My husband gave a bouquet of flowers to me.' |
| | 3rd p | A mãe da Paula deu um celular novo para ela.<br>'Paula's mother gave a new cell phone to her.' |
| Dative clitic | 1st p | Meu amigo me deu um livro de contos.<br>my friend DAT CL-1s gave a book of short stories<br>'My friend gave me a book of short stories.' |
| | 3rd p | O pai do Pedro lhe deu uma máquina fotográfica.<br>the father of-the Pedro DAT CL-3s gave a camera<br>'Pedro's father gave him a camera.' |
| Dative clitic + a-DP (clitic doubling) | 3rd p | *A Julia lhe deu uma calça jeans moderna ao marido dela.<br>the Julia DAT CL-3s gave a pants jeans modern to-the husband of-her<br>'Julia gave her husband a modern jeans.' |
| DP + theme DP (English-type DOC) | 3rd p | *A Paula deu o filho dela uma bicicleta nova.<br>the Paula gave the son of-her a bicycle new<br>'Paula gave her son a new bicycle.' |

If the L3 learners transfer exclusively from English, they will accept English-type DOCs, which are ungrammatical in BP, and they may rate sentences with PPs higher than sentences with dative clitics. If the L3 learners transfer always from Spanish, they will accept clitic doubling, which is also an ungrammatical construction in BP, and they will rate sentences with dative clitics higher than sentences with PPs.

(vii) A Maria deu- me o livro.
the Maria gave-DAT CL-1s the book
'Maria gave me the book.'

Fillers were included not only as distractors but also to balance the number of grammatical and ungrammatical sentences. To complete the GJT, participants were instructed to judge the sentences based on how possible or impossible they were in Portuguese, without considering specific contexts of usage.

#### 5.3.2.2. Acceptability Judgment Task

The description of the AJT is presented in Chapter 3 and will be repeated here for convenience. The AJT intended to test non-native speakers' knowledge of productivity and use of 1st person dative clitics with different semantic roles. That is, unlike the GJT, which tested only the grammaticality of specific syntactic constructions in BP, the AJT was designed to test more subtle differences related to semantic aspects of the indirect object and with daily use of dative clitics in the colloquial register.[48]

It had a total of 32 sentences: 16 target items and 16 fillers. Half of the sentences were acceptable and the other half was unacceptable in colloquial BP. Target items were divided into 4 categories according to the semantic role of the indirect object. In all the target items the indirect object was expressed by a 1st person dative clitic. Since the 3rd person dative clitic is not used in the colloquial variety of BP in any of the semantic categories, 3rd person datives were not included in this test. The test was presented to the participants in a written format. Table 20 shows the 4 categories of the AJT and a sample item within each category (see Appendix C for the full list of test sentences).

[48] See more details below about the instructions that were given to the participants before they completed the AJT.

*Table 20: Categories and sample items of the AJT*

| Semantic Role | Example |
|---|---|
| GOAL | A professora me ensinou o significado dessas palavras.<br>the teacher DAT CL-1s taught the meaning of-these words<br>'The teacher taught me the meaning of these words.' |
| SOURCE | A escola do meu filho me cobrou uma multa.<br>the school of-the my son DAT CL-1s charge a late fee<br>'My son's school charged me a late fee.' |
| BENEFACTIVE | Meu pai me construiu uma casinha de madeira.<br>my father DAT CL-1s built a house of wood<br>'My father built me a wooden house.' |
| POSSESSOR | ?O Roberto me reconheceu a voz imediatamente.<br>the Roberto DAT CL-1s recognize the voice immediately<br>'Roberto recognized my voice immediately.' |

The list of verbs used in each semantic category is presented in Table 21 below.

*Table 21: List of verbs used in each semantic context of the AJT*

| GOAL | SOURCE | BENEFACTIVE | POSSESSION |
|---|---|---|---|
| *emprestar* 'lend'<br>*ensinar* 'teach'<br>*perguntar* 'ask'<br>*prometer* 'promisse' | *exigir* 'demand'<br>*tirar* 'take away'<br>*cobrar* 'charge'<br>*roubar* 'steal' | *comprar* 'buy'<br>*construir* 'build'<br>*preparar* 'prepare, fix'<br>*compor* 'compose, make' | *cortar* 'cut'<br>*reconhecer* 'recognize'<br>*beijar* 'kiss'<br>*adivinhar* 'guess' |

As described in Chapter 3, the BP native speakers accepted 1st person dative clitics with goal, source and benefactive indirect objects, but did not accept possessor datives. Because DOCs are perfectly acceptable with goal indirect objects in all three languages, transfer from either English or Spanish will have a positive effect on learners' acceptability of goal datives. Transfer from Spanish may even have a more positive effect because Spanish, like BP, has 1st person dative clitics. DOCs with benefactive indirect objects are also possible in English and Spanish, but less acceptable in BP than goal datives. Transfer from either English or Spanish may lead to higher acceptability rates among the L3 learners than among the BP native speakers. Spanish has DOCs

with source and possessor indirect objects but English does not. First person source datives are acceptable in BP but possessor datives are not. Therefore, transfer from English may lead the L3 learners to rate source datives lower than the BP native speakers but to look native-like in the ratings of possessor datives. On the other hand, transfer from Spanish may lead the L3 learners to rate source datives like the BP native speakers but to over-accept possessor datives.

Participants were instructed to judge the sentences based on how acceptable they would be in an informal conversation, which intended to capture their knowledge of colloquial, daily use of the language. To judge sentences in the AJT participants used a 4-point scale, ranging from 'completely unacceptable' to 'perfectly acceptable', with a 'don't know' option. The scale appeared in the instructions and was repeated in the top of every page of the AJT and the GJT as follows:

1 = completely unacceptable/completamente impossível
2
3
4 = perfectly acceptable/perfeitamente possível
don't know/não sei

The AJT and the GJT were both placed in a web-based survey tool called survey gizmo with the language background questionnaire, the language distance questionnaire and the proficiency tests. The GJT appeared after the AJT, so the subtle differences present in the AJT would not be judged after the participants had rated sentences with a more clear-cut difference in grammaticality. The link to the tasks was sent separately to each subject and the tests were completed in a place of his or her own convenience. The researcher was not present when the participants completed the tasks.

#### 5.3.2.3. Picture description task in Portuguese

The picture description task was also described in Chapter 3 and will be repeated here for convenience. In addition to judging sentences in BP, the L3 learners were asked to make oral descriptions of pictures for which they had to choose between a non-dative and a dative construction. The purpose of this task was to test how frequent each of these constructions was used by non-native speakers of Portuguese in different semantic contexts and whether their preferences matched those of BP native speakers. Participants were provided with a sequence of pictures and 3 or 4 lexical elements they had to use to build a one-sentence oral description of each picture. The intention of giving participants the vocabulary they had to use was to make the task easier for L3-BP learners as well as to ensure that participants used a specific verb that allowed either a POC or a dative construction. Participants were instructed to use the words that appeared below the picture to build a sentence that described the scene in the picture. To elicit 1st as well as 3rd person constructions, the task was divided into two parts. Participants' oral production was recorded, transcribed, and coded for the type of phrase used to express the indirect object (e.g. PP, a+DP, dative clitic). For the numerical analyses, the percentages of each phrase type used with goal, source, benefactive and possessor indirect objects were calculated.

The task had a total of 32 pictures: 16 target items divided in 4 semantic categories and 16 fillers. Each target picture was used to elicit 1st and 3rd person indirect objects, for a total of 32 target contexts. Participants saw all the pictures twice. The first time, they were instructed to describe the scene in the picture in one sentence using the words that appeared below the picture. This elicited 3rd person indirect objects. The

second time, they were told to imagine that they were one of the participants in the picture and describe the scene in the picture from the perspective of that specific participant. This elicited 1st person indirect objects. The categories of the picture description task are displayed in Table 22.

*Table 22: Categories of the picture description task*

| Goal | | Source | | Benefactive | | Possession | |
|---|---|---|---|---|---|---|---|
| 1st | 3rd | 1st | 3rd | 1st | 3rd | 1st | 3rd |

One picture of each semantic category with expected responses for 1st and 3rd person is found below (see Appendix D for all test items, including filler pictures).

GOAL

carteiro – entregar – pacote – mulher
*postman – to hand – package – woman*

**1st p**: - O carteiro me entregou o
the postman DAT CL-1s handed the
pacote.
package.

- O carteiro entregou o pacote para mim.
the postman handed the package to me.

**3rd p**: - O carteiro entregou o pacote para a
the postman handed the package to the
mulher.
woman.

BEFEFACTIVE

Julia – fazer – bolo – Carlos
*Julia – to bake – cake – Carlos*

**1st p**: - A Julia fez um bolo para mim.
the Julia baked a cake for me.

**3rd p**: - A Julia fez um bolo para o Carlos.
the Julia baked a cake for the Carlos

SOURCE

filho – ganhar – jogo – pai
*son – to win – game – father*

**1st p**: - O meu filho ganhou o jogo de mim.
the my son won the game from me.
'My son beat me at the game.'

**3rd p**: - O filho ganhou o jogo do pai.
the son won the game from-the father.
'The son beat the father at the game.

POSSESSOR

barbeiro – cortar – cabelo – menino
*hairdresser – to cut – hair – boy*

**1st p**: - O barbeiro cortou o meu cabelo.
the hairdresser cut the my hair

**3rd p**: - O barbeiro cortou o cabelo do
the hairdresser cut the hair of-the

menino.
boy.

The list of verbs used in each semantic category is presented in Table 23.

*Table 23: List of verbs used in each semantic context of the picture description task*

| GOAL | SOURCE | BENEFACTIVE | POSSESSION |
|---|---|---|---|
| *entregar* 'hand' | *cobrar* 'charge' | *ler* 'read' | *cortar* 'cut' |
| *ensinar* 'teach' | *tirar* 'take' | *cantar* 'sing' | *lavar* 'wash' |
| *dar* 'give' | *tomar* 'take away' | *preparar* 'prepare, fix' | *examinar* 'examine' |
| *mostrar* 'show' | *ganhar* 'win' | *fazer* 'make' | *olhar* 'look' |

Because of differences between colloquial and formal BP, the BP native speakers' acceptability and production of dative constructions did not coincide entirely, as described and discussed in Chapter 3. First person dative clitics were the preferred option only with goal indirect objects. Few 1st person dative clitics were produced with source and benefactive arguments and almost none with possessor arguments. Due to restrictions related to person in the use of dative clitics in BP, only POCs were produced in the 3rd person context. In addition to PPs with para 'to/for', a+DPs were also produced with goal and benefactive arguments. Because the dative alternation is possible with goal indirect objects in English and Spanish, transfer from either English or Spanish will help the L3 BP learners to look more native-like when producing goal indirect objects in the first person context. Because Spanish, like Portuguese, has dative clitics, transfer from Spanish will have even a more positive effect. On the contrary, transfer from English and/or Spanish will lead to over-production of 1st person dative clitics with the role of benefactive. If transfer comes exclusively from Spanish, the L3 learners will produce clitic doubling, and if transfer comes exclusively from English, production of English-type DOC will be attested. Because POCs are the only option with source and possessor indirect objects in English, if the L3 BP learners transfer from English they will look more like BP native speakers with these two kinds of arguments.

On the contrary, because Spanish prefers DOCs with source and possessor arguments, and the POC counterpart is not available with most source arguments,[49] transfer from Spanish will lead to over-production of 1st person dative clitics with the role of source and incorrect use of datives with 3rd person source arguments and 1st and 3rd person possessor arguments. Predictions for transfer from English and Spanish in the picture description task are summarized in Table 24.

*Table 24: Summary of predictions for transfer from English and Spanish in the picture description task in Portuguese*

| | **GOAL** | | **SOURCE** | | **BENEFACTIVE** | | **POSSESSION** | |
|---|---|---|---|---|---|---|---|---|
| | 1st person | 3rd person | 1st person | 3rd person | 1st person | 3rd person | 1st person | 3rd person |
| **Transfer from English** | Similar to BP native speakers | Use of English-type DOCs | Similar to BP native speakers | Similar to BP native speakers | Over-production of DOCs | Use of English-type DOCs | Similar to BP native speakers | Similar to BP native speakers |
| **Transfer from Spanish** | Similar to BP native speakers | Use of clitic doubling | Over-production of dative clitics | Use of clitic doubling and a-DPs | Over-production of DOCs | Use of clitic doubling | Over-production of dative clitics | Use of clitic doubling and a-DPs |

The pictures were presented to the participants in a computer screen and their answers were audio recorded. Many participants met with the researcher in person to complete the task and others were audio recorded via skype. In all cases the recording session was closely followed by the researcher. One participant in the BP native speakers group and one in the L1 English/L2 Spanish group did not complete this task.

[49] The use of DOCs vs. POCs in Spanish is described in Chapter 2, Section 2.3 and data from L1 Spanish speakers can be found in Section 5.3.3.4.

#### 5.3.2.4. Picture description task in Spanish

In addition to completing a picture description task in Portuguese, the L3 BP learners also completed a picture description task in Spanish. The Spanish version of this task had the same pictures as the task in Portuguese with the words that the participants had to use to describe the scene translated into Spanish. This task intended to test L1 English/L2 Spanish speakers' knowledge of clitic doubling and dative constructions in Spanish and also to look at whether L3 BP learners thought that the usage of dative constructions in Spanish and BP followed a similar pattern. The participants completed the task in Portuguese first and after a period of at least a week met with the researcher again to complete the task in Spanish. A total of 18 participants in the L1 English/L2 Spanish group completed the Spanish version of the task and 16 participants in the L1 Spanish/L2 English group. The latter was used as a control group.

The data analysis was performed in the same way described for the picture description task in Portuguese. That is, after recording and transcribing each sentence the participants produced to describe the pictures, the sentences were coded for the type of phrase used to express the indirect object (e.g. clitic doubling, dative clitic, PP, a-DP). Percentages of production of each phrase type with the different kinds of indirect objects were used for the numerical analyses.

The categories of the picture description task in Spanish are the same as the ones specified in Table 22. Because expected responses for each language are different, one picture of each semantic category with expected responses for the version

of the task in Spanish are presented as well (see Appendix D for all test items, including filler pictures).

GOAL

Luis – dar – gato – Julia
*Luis – to give – cat – Julia*

**1st p**: - Luis me dio un gato
Luis DAT CL-1s gave a cat.

**3rd p**: - Luis (le) dio un gato
Luis DAT CL-3s gave a cat

a Julia.
DAT case marker Julia.

BEFEFACTIVE

pareja – cantar – canción – Ana
*couple – to sing – song – Ana*

**1st p**: - La pareja me cantó una canción.
the couple DAT CL-1s sang a song

**3rd p**: - La pareja le canto una canción .
the couple DAT CL-3s sang a song

a Ana.
DAT case marker Ana

- La pareja canto una canción para Ana.
the couple sang a song for Ana

SOURCE

delfín – quitar – pelota – bañista
*dolphin – to take – ball – swimmer*

**1st p**: - El delfín me quitó la pelota.
the dolphin DAT CL-1s took the ball

**3rd p**: - El delfín le quitó la pelota
the dolphin DAT CL-3s took the ball

al bañista.
DAT case marker-the swimmer

POSSESSOR

madre – lavar – pelo – hija
*mother – to wash – hair – daughter*

**1st p**: - Mi madre me lavó el pelo.
my mother DAT CL-1s washed the hair

**3rd p**: - La madre le lavó el pelo
the mother DAT CL-1s washed the hair

a la hija.
DAT case marker the daughter.

- La madre lavó el pelo
the mother washed the hair

de la hija.
of the daughter

According to previous studies on Spanish datives (e.g. Masullo 1992, Cuervo 2003), Spanish speakers will prefer DOCs to POCs with all kinds of indirect objects. Because the L2 Spanish speakers in this study have a high proficiency level in Spanish, it is expected that they have acquired dative constructions and are able to use them productively. If they still transfer from English, they will produce more POCs than

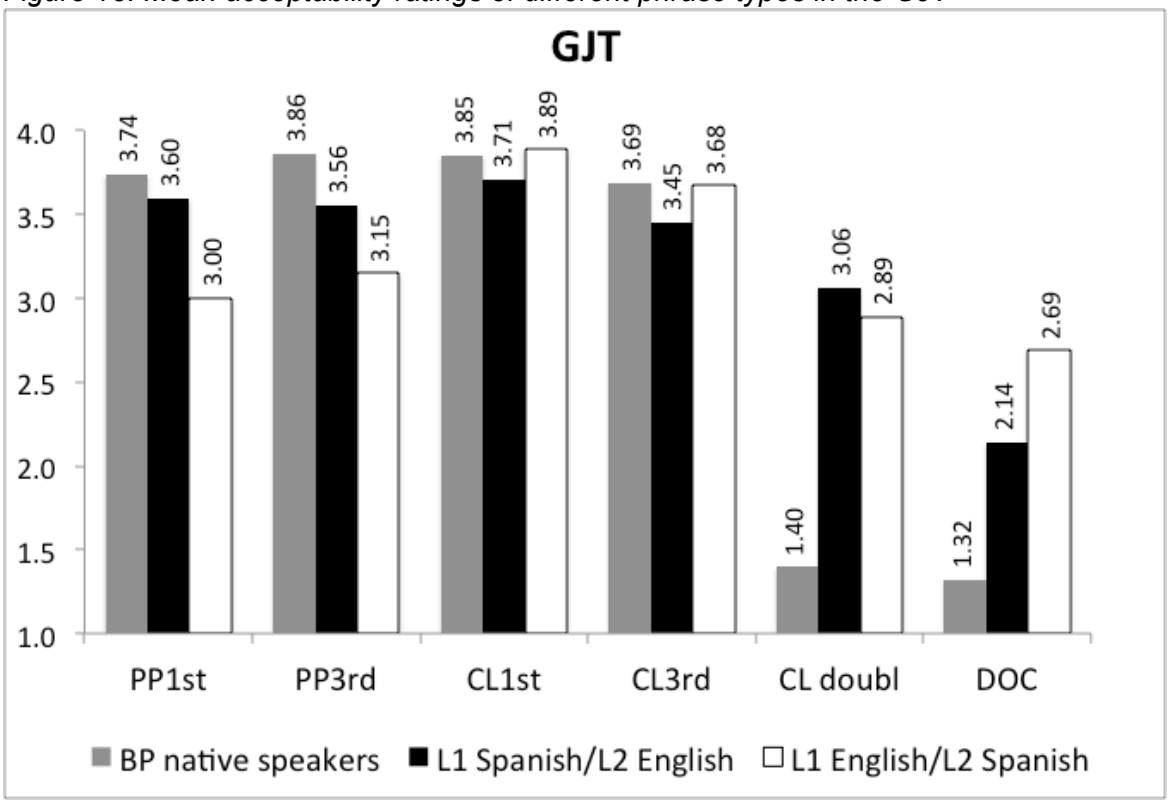
Spanish native speakers, particularly with source and possessor indirect objects. They may also produce English-type DOCs with goal and benefactive indirect objects.

### 5.3.3. Results

#### 5.3.3.1. GJT: results and brief discussion

The main goal of the GJT task was to test basic knowledge of the structures that participate in the dative alternation in BP: PPs and constructions with dative clitics; as well as to look at whether non-native speakers of Portuguese transferred from English and/or Spanish. This was done by including clitic doubling constructions (only possible Spanish) and English-type DOCs (only possible in English) in the task. Mean acceptability ratings on all phrase types included in the GJT were submitted to statistical analysis and are presented in Figure 18.

*Figure 18: Mean acceptability ratings of different phrase types in the GJT*




Notes: PP1st: 1st person PP, PP3rd: 3rd person PP, CL1st: 1st person dative clitic, CL3rd: 3rd person dative clitic, *CL doubl: clitic doubling, *DOC: English-type DOC

Two mixed ANOVAs were conducted to analyze the results of the GJT. The first one compared mean acceptability ratings of PPs and dative clitics, which were presented in 1st and 3rd person; and the second one compared mean acceptability ratings of all phrase types in the 3rd person. Mean ratings of 1st person PPs and dative clitics were not included in the second analysis because English-type DOCs and clitic doubling constructions were only presented in the 3rd person.

For the first ANOVA, phrase type: (PP and dative clitic) and person (1st and 3rd person) were the within-subjects variables, and group (BP native speakers, L1 Spanish/L2 English and L1 English/L2 Spanish) was the between-subjects variable. There was a significant main effect of phrase type, $F(1,59) = 9.67$, $p < .05$, but no

significant main effect of person, $F(1,59) = 3.03$, $p = .09$. There was also a significant interaction between phrase type and person, $F(1,59) = 15.15$, $p < .05$, and between phrase type and group, $F(2,59) = 10.91$, $p < .05$, but no significant interaction between person and group, $F(2,59) = 1.08$, $p = .35$. The interaction between phrase type and person was due to the fact that 1st person dative clitics were rated higher than PPs, whereas both 3rd person phrases received similar mean ratings. The source of the interaction between phrase type and group can be found in the fact that the BP native speakers and the L1 Spanish speakers rated PPs and dative clitics very similarly, whereas the L1 English speakers' mean ratings of dative clitics are higher than those of PPs. The difference between the L1 English speakers and the other two groups indicated by this interaction was confirmed by the results of the between-subjects analysis. There was a significant main effect of group, $F(2,59) = 6.83$, $p < .05$, and the results of the post hoc tests revealed that the BP native speakers did not differ significantly from the L1 Spanish/L2 English ($p = .13$), and that the two L3 groups did not differ from each other ($p = .47$), but the L1 English/L2 Spanish did differ significantly from the BP native speakers ($p < .05$).

For the second ANOVA, phrase type (PP, dative clitic, clitic doubling and English-type DOC) was the within-subjects variable and group was the between-subjects variable. The results revealed a main effect of phrase type, $F(3,177) = 105.58$, $p < .05$. Contrasts indicated that PPs' and dative clitics' mean acceptability ratings were not significantly different, $F(1,59) = 1.04$, $p = .31$, but mean acceptability ratings of PPs were significantly higher than those of clitic doubling constructions, $F(1,59) = 90.69$, $p < .05$, and those of English-type DOCs, $F(1,59) = 157.06$, $p < .05$. There was also a

significant interaction between phrase type and group, $F(6,177) = 23.10$, $p < .05$. This interaction is the result of the L3 BP learners having rated ungrammatical constructions much higher than the BP native speakers. The between-subjects analysis also revealed a main effect of group, $F(2,59) = 15.89$, $p < .05$. Post hoc tests indicated that both L3 BP groups differed significantly from the BP native speakers (both $p < .05$) but did not differ from each other ($p = 1$).

Because the categories that included English-type DOC and clitic doubling were included to specifically look at transfer from English and Spanish respectively, analyses to evaluate the relationship between learners' mean ratings of sentences in these two categories and their proficiency scores in the L2 and the L3 were also performed. Within the L1 Spanish/L2 English group, it was found that mean ratings of English-type DOC significantly related to English proficiency test scores, $r = .64$, $p < .01$. Nevertheless, within the L1 English/L2 Spanish group, there was no significant correlation between mean ratings of clitic doubling constructions and the Spanish proficiency test scores, $r = .06$, $p = .40$. Partial correlation between the Portuguese proficiency test scores and the two ungrammatical constructions, controlling for the learner's native language, were also computed. The results indicated that proficiency in the target language was not related to ratings of English-type DOC, $r = –.21$, $p = .1$, and clitic doubling, $r = .12$, $p = .23$.

To summarize, the L3 BP learners' mean ratings were more similar to those of the BP native speakers when judging grammatical sentences than when judging ungrammatical constructions. However, the L1 English/L2 Spanish group differed from the BP native speakers by rating dative clitics higher than PPs. The two L3 BP groups

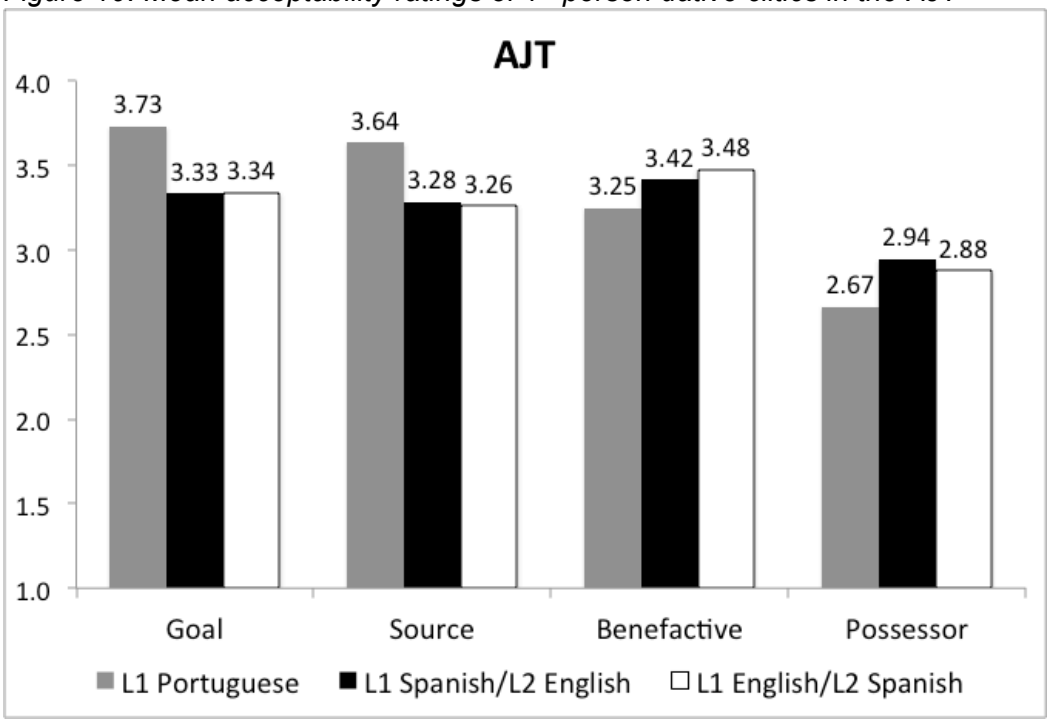
were similar in their ratings of clitic doubling and English-type DOCs, but differed from the BP native speakers. These results indicate that although both groups of learners were able to satisfactorily acquire or positively transfer POCs from either English or Spanish and dative clitics from Spanish, they also incorrectly transferred clitic doubling constructions from Spanish and English-type DOCs from English. Furthermore, the more proficient the L1 Spanish speakers were in English, the more they transferred from English, whereas proficiency in Spanish did not affect transfer from Spanish among the L1 English speakers. Because dative constructions are the preferred option in Spanish, the L1 English/L2 Spanish group's preference of dative clitics over PPs in Portuguese can be assumed to be due to influence from Spanish as well.

Finally, proficiency in Portuguese did not make the L3 learners more target-like in their judgments of ungrammatical constructions, which could indicate that there is a persistent influence of previously acquired languages in the grammar of the target language. I will come back to the discussion of this point after I present the results of the other tasks.

#### 5.3.3.2. AJT: results and brief discussion

The AJT tested for acceptability of 1st person dative clitics with different semantic roles. Mean acceptability ratings of goal, source, benefactive and possessor datives are displayed in Figure 19.

*Figure 19: Mean acceptability ratings of 1st person dative clitics in the AJT*




A repeated-measures ANOVA was conducted to analyze the results of the AJT. There was a main effect of semantic role, $F(3,177) = 30.55$, $p < .05$. Contrasts revealed that there was no significant difference between goal and source datives, $F(1,59) = 0.90$, $p = .35$, and between source and benefactive datives, $F(1,59) = .02$, $p = 90$, but benefactive and possessor datives differed significantly from each other, $F(1,59) = 52.73$, $p < .05$. The between-subject analysis indicated no significant differences between the groups, $F(2,59) = 0.004$, $p = .99$, however, there was a significant interaction between semantic role and group, $F(6,177) = 6.40$, $p < .05$. Although the three groups did not differ in their mean acceptability ratings, they did not exhibit the same pattern of ratings. The BP native speakers rated goal and source datives higher than the two groups of learners, whereas both groups of learners rated benefactive and possessor datives higher than the BP native speakers. Four one-way ANOVAs were

conducted to compare the three groups on each semantic role (Bonferroni correction was used). The results of the one-way ANOVAs revealed that the groups differed significantly in their ratings of goal and possessor datives. Both groups of learners rated goal datives significantly lower than the BP native speakers and possessor datives significantly higher than the BP native speakers.

Because using dative constructions when the indirect object is the possessor of the direct object is only possible in Spanish, this category of the AJT also tested for negative transfer from Spanish. Again, an analysis of correlation was performed in the mean ratings of possessor datives and the Spanish proficiency test scores of the L1 English speakers to look at whether proficiency in the L2 plays a role in processes of cross-linguistic influence. The results revealed that mean ratings of possessor datives were not related to scores in the Spanish proficiency test, $r = .12$, $p = .30$. Partial correlation between the Portuguese proficiency test scores and the two L3 BP groups' mean ratings of possessor datives constructions, controlling for the learner's native language, were also computed. The results indicated that proficiency in the target language was not related to ratings of possessor datives, $r = .17$, $p = 14$.

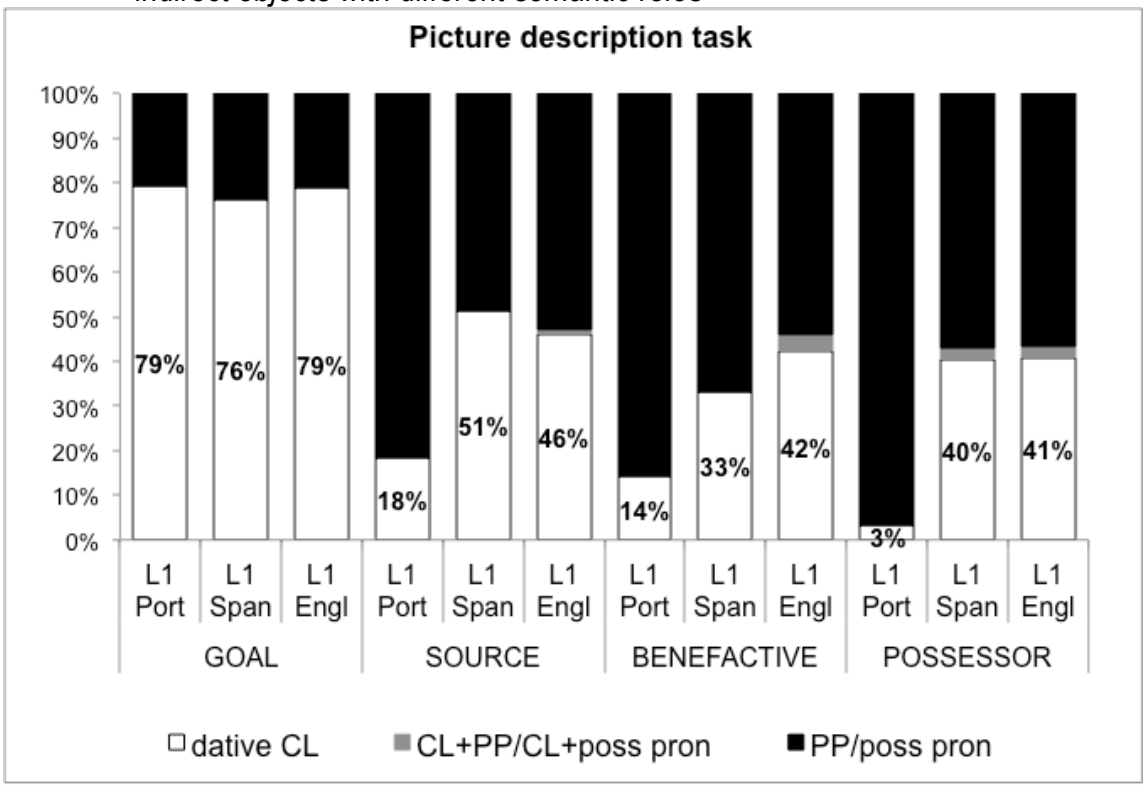
To summarize, the two groups of L3 learners were very similar to each other in their ratings of all kinds of 1$^{st}$ person dative clitics. Furthermore, the learners only differed from the BP native speakers in their ratings of goal datives and possessor datives. Because DOCs with indirect objects that have the role of possessor are being lost from BP grammar but are very productive in Spanish, negative transfer from Spanish may have influenced learners' judgments of sentences with possessor datives. However, influence from Spanish, once more, did not seem to be related to proficiency

level in this language among the L1 English speakers or to proficiency level in Portuguese for both groups of L3 BP. Finally, because both groups of learners highly accepted dative clitics with the role of goal in the GJT, lower ratings of dative goals in the AJT were unexpected. Mean ratings may have been affected by ratings to the item with the verb *perguntar* 'ask', as happened with the BP native speakers (see discussion in Chapter 3, Section 3.3.3.1).

#### 5.3.3.3. Picture description task in Portuguese: results and brief discussion

The picture description task in Portuguese was designed to test L3 BP learners' usage of the constructions that participate in the dative alternation in oral production. Both 1st and 3rd person indirect objects, with different semantic roles were elicited. Mean percentages of each phrase type used to express 1st person indirect objects are displayed in Figure 20.

*Figure 20: Mean percentage of dative and non-dative constructions used to express 1st person indirect objects with different semantic roles*




Notes: L1 Port: BP native speakers, L1 Span: native speakers of Spanish, L1 Engl: native speakers of English, CL: clitic, poss pron: possessive pronoun

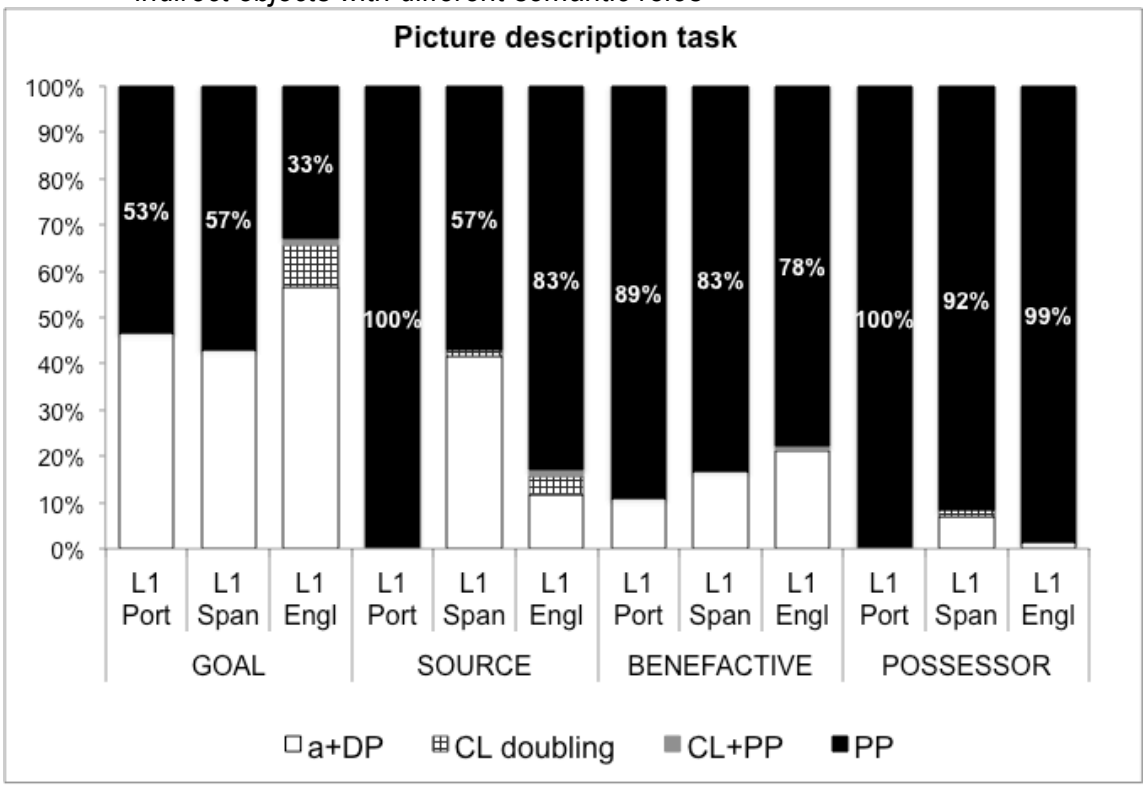
A repeated-measures ANOVA was used to analyze the production of 1st person dative clitics, with semantic role as the within-subjects variable and group as the between-subjects variable. There was a main effect of semantic role, and contrasts indicated that the participants produced significantly more dative clitics with goal than with source indirect objects, $F(1,57) = 168.13$, $p < .05$, and significantly more dative clitics with source than with benefactive indirect objects, $F(1,57) = 7.38$, $p < .05$. However, there was no significant difference in the production of benefactive and possessor datives, $F(1,57) = 0.12$, $p = .73$. There was also a significant interaction between semantic role and group, $F(6,171) = 7.42$, $p < .05$ due to the fact that both groups of learners produced more dative clitics than the BP native speakers with source,

benefactive and possessor arguments. Furthermore, the test of between-subjects effects indicated a main effect of group, $F(2,57) = 8.38$, $p < .05$ and post hoc tests revealed that both groups of learners differed from the BP native speakers but did not differ from each other.

To look at whether level of proficiency in Spanish among the L1 English speakers correlated with the use of possessor dative clitics in the 1st person context, an analysis of correlation was performed. Results indicated that production of 1st person dative clitics to express arguments that had the role of possessor was related to scores in the Spanish proficiency test within the group of L1 English speakers, $r = .56$, $p < .01$. A partial correlation between both L3 groups' mean ratings of the possessor datives and proficiency scores in Portuguese, controlling for group, was also performed. No relation between these two variables was found, $r = –.02$, $p = .45$.

Figure 21 shows mean percentages of each phrase type used to express 3rd person indirect objects that had different semantic roles.

*Figure 21: Mean percentage of dative and non-dative constructions used to express 3rd person indirect objects with different semantic roles*




Notes: L1 Port: BP native speakers, L1 Span: native speakers of Spanish, L1 Engl: native speakers of English, CL: clitic

A repeated-measures ANOVA was used to analyze the production of 3rd person PPs[50] with semantic role as the within-subjects variable and group as the between-subjects variable. There was a main effect of semantic role, $F(3,171) = 59.29$, $p < .05$ and contrasts revealed that participants produced significantly more PPs with source indirect objects than with goal indirect objects, $F(1,57) = 49.97$, $p < .05$, and significantly more PPs with possessor indirect objects than with benefactive indirect objects, $F(1,57) = 26.94$, $p < .05$. On the other hand, there was no difference in the mean percentages of PPs produced with source and benefactive indirect objects, $F(1,57) = 1.33$, $p = .26$.

[50] Although "*a*" is considered a full preposition in BP, percentages of a+DP are represented separately and are not included in this statistical analysis because of the different morphosyntactic function of "*a*" in Spanish and BP.

There was also a main effect of group, $F(2,57) = 3.97$, $p < .05$, and an interaction between semantic role and group, $F(6,171) = 6.83$, $p < .05$. Although post hoc tests indicated that the differences between the BP native speakers and the L1 Spanish speakers and the BP native speakers and the L1 English speakers were only marginally significant ($p = .052$ and .069 respectively), and that the two groups of learners did not differ from each other, the groups did not exhibit the same pattern of PP production with 3rd person indirect objects. To better understand the source of the interaction between semantic role and group, four one-way ANOVAs were conducted to compare the three groups on each semantic role (Bonferroni correction was used). The results of the one-way ANOVAs revealed that the three groups did not differ on their production of PPs when the indirect object was a goal or a benefactive. The three groups differed significantly on their production of PPs when the indirect objects were a source: the BP native speakers produced significantly more PPs than both groups of learners and the L1 English speakers produced significantly more PPs than the L1 Spanish speakers. The three groups also differed marginally on their production of PPs within the possessor category because the L1 Spanish speakers produced significantly less PPs than the BP native speakers. The L1 English speakers did not differ from the BP native speakers in their production of possessor indirect objects.

Although the L3 learners accepted English-type DOCs in the GJT, they were not found in the oral production of any of the two groups of learners. On the other hand, unlike the BP native speakers, the L3 BP learners did produce clitic doubling constructions in BP. The L1 Spanish/L2 English speakers' production of clitic doubling was lower than that of the L1 English/L2 Spanish speakers. One participant from the L1

Spanish/L2 English group produced only one clitic doubling with a 3rd person source argument and another one with a 3rd person possessor argument, as in (85). There was also 3% of constructions in which a 1st person dative clitic doubled a possessive pronoun, as in (86). None of these constructions is possible in BP.

(85) O médico **le** examina a garganta **ao** **paciente**.
the doctor DAT CL-3s examines the throat DAT marker-the patient
'The doctor examines the patient's throat.'
(L1 Spanish, participant # 215)

(86) O dentista olha- **me** **meus** dentes.
the dentist look- DAT CL-1s my teeth
'The dentist looks my teeth.'
(L1 Spanish, participant # 220)

The L1 English speakers produced more clitic doubling constructions than the L1 Spanish speakers, as in (87), and they also produced constructions with either a PP or a possessive pronoun doubled by a dative clitic, as in (88) and (89). A total of 9 participants in the L1 English/L2 Spanish group produced either a clitic doubling or a CL+PP construction in their production in Portuguese.

(87) Luis **lhe** deu um gato à **Joana**.
Luis DAT CL-3s gave a cat DAT marker-the Joana
'Luis gave Joana a cat.'
(L1 English, participant # 337)

(88) O carteiro **lhe** entrega o pacote **pra** **mulher**.
the postman DAT CL-3s hands the package to-the woman
'The postman hands the package to the woman.'
(L1 English, participant # 318)

(89) A minha mãe **me** lê uma historinha **para mi**.
the my mother DAT CL-1s reads a story for me
'My mother reads me a story.'
(L1 English, participant # 302)

The percentage of each construction is displayed in Table 25.

*Table 25: Mean percentages of clitic doubling and CL+PP constructions produced by the L1 English/L2 Spanish speakers*

| | GOAL | | SOURCE | | BENEFACTIVE | | POSSESSOR | |
|---|---|---|---|---|---|---|---|---|
| | 1st p | 3rd p | 1st p | 3rd p | 1st p | 3rd p | 1st p | 3rd p |
| **CL doubling** | -- | 9% | -- | 4% | -- | -- | -- | -- |
| **CL+PP** | -- | 1% | 1% | 1% | 3% | 1% | 3% | -- |

Both groups of learners also produced a+DPs when the indirect object was a source or a possessor, as in (90) and (91). As previously mentioned, the meaning of the preposition "*a*" is not compatible with the semantic relation that source and possessor indirect objects have with direct objects. Therefore, learners seemed to have used "*a*" in Portuguese as a dative case marker, transferring the use of the dative case marker "*a*" from Spanish.

(90) O policial cobra a muleta (meaning multa) **ao motorista**.
the policeman charges the crutch (meaning penalty) DAT marker-the driver
'The policeman charged a penalty to the driver."
(L1 English, participant # 321)

(91) O barbeiro corta cabelo **ao menino**.
the hairdresser cuts hair DAT marker-the boy
'The hairdresser cuts the boy's hair.'
(L1 Spanish, participant # 223)

Because production of clitic doubling and a+DPs with source and possessor indirect objects are ungrammatical and indicate transfer from Spanish, an analysis of partial correlation, controlling for group, between the percentage of production of these constructions and scores in the proficiency test in Portuguese was performed. Results indicated that the lower the production of these constructions within the semantic categories of source and possessor, the higher the proficiency in Portuguese, r = –.47,

$p < .05$ and $r = –.52$, $p < .05$. For the L1 English group, production of these constructions did not correlate with proficiency in Spanish, $r = .19$, $p = .22$ and $r = –.20$, $p = .21$.

In addition to using clitic doubling and a+DP constructions, both groups of learners made at least other two morphosyntactic errors that can be traced back to Spanish when producing sentences in BP: position of clitics and use of direct object marking. In Spanish clitics can appear before the auxiliary when the verb is in the present or the past progressive, but this position of the clitic is ungrammatical in BP, and clitics appear more frequently between the auxiliary and the main verb and more rarely after the main verb in progressive tenses. Both the L1 Spanish and the L1 English speakers produced sentences with the clitic before the auxiliary verb in BP, as exemplified in (92) and (93).

(92) A professora me está ensinando matemática.
the teacher DAT CL-1s is teaching math
'The teacher is teaching me math.'
(L1 Spanish, participant # 200)

(93) A minha mãe me está lendo uma história.
the my mother DAT CL-1s is reading a story
'My mother is reading me a story.'
(L1 English, participant # 309)

In Spanish all direct objects that are [+animate] and [+specific] are marked with "*a*", but BP does not mark direct objects regardless of their semantic features. Both the L1 Spanish and the L1 English speakers produced sentences in Portuguese with direct object marking (DOM), as shown in (94) and (95).

(94) O astronauta está cumprimentando **a**o marciano.
the astronaut is greeting DOM-the Martian
'The astronaut is greeting the Martian.'
(L1 Spanish, participant # 209)

(95) O cachorro lambe **a**o bebê.
the dog licks DOM-the baby
'The dog licks the baby.'
(L1 English, participant # 302)

There were also cases of verbs that were conjugated like in Spanish, as in (96) and (97), and other words that were produced in the Spanish form or with Spanish sounds.

(96) Luis **dio**- me um gato.
Luis gave- CL-1s a cat
'Luis gave me a cat.'
(L1 Spanish, participant # 215)

(97) A menina **construyó** um castelo na areia.
the girl built a castle on-the sand
'The girl built a castle on the sand.'
(L1 English, participant # 303)

Learners in both L3 groups chose wrong prepositions when using PPs to express indirect objects. Percentages of preposition errors made by each group within each semantic category are displayed in Table 26. Both groups of learners made most of their preposition errors with source PPs. Within the L1 Spanish/L2 English group, the majority of the errors were made in sentences with the verbs *cobrar* 'charge', as in (98), and *tirar* 'take away', as in (99); whereas within the L1 English/L2 Spanish group, most of the preposition errors were produced in sentences with the verb *ganhar* 'win', as in (100). The L1 English speakers also made some errors with benefactive PPs, as exemplified in (101). The L1 Spanish speakers, on the other hand, used the wrong preposition with a few possessor PPs as well, as in (102). Finally, all but one of the

preposition errors made by the L1 Spanish speakers were instances of incorrect use of *para* 'for', whereas among the L1 English speakers there was more variation on the choice of prepositions when errors were made.

*Table 26: Mean percentages of preposition errors made by each group of L3 BP learners*

| | GOAL | | SOURCE | | BENEFACTIVE | | POSSESSOR | |
|---|---|---|---|---|---|---|---|---|
| | 1st p | 3rd p | 1st p | 3rd p | 1st p | 3rd p | 1st p | 3rd p |
| **L1 Spanish/L2 English** | -- | -- | 11% | 18% | -- | -- | 1% | 6% |
| **L1 English/L2 Spanish** | -- | 3% | 8% | 13% | 1% | 8% | 1% | -- |

(98) O policial cobra uma multa **pro** motorista.
the police officer charges a ticket for-the driver
'The police officer gave the driver a ticket."
(L1 Spanish, participant # 201)

(99) O fotógrafo tira a foto **pra** noiva.
the photographer takes the picture for-the bride
'The photographer takes the picture of the bride.'
(L1 Spanish, participant # 210)

(100) O filho ganhou o jogo **com** seu pai… o pai dele.
the son won the game with his dad… the dad of-him
'The son won the game against his dad.'
(L1 English, participant # 316)

(101) A mãe lê uma historinha **na** filha.
the mother reads a story on-the daughter
'The mother reads a story for her daughter.'
(L1 English, participant # 330)

(102) O médico examinou a garganta **para** o paciente.
the doctor examined the throat for the patient
'The doctor examined the patient's throat.'
(L1 Spanish, participant # 212)

To summarize the results of the picture description task in Portuguese, in the 1st person context, the two groups of L3 BP were very similar to each other. They were also similar to the BP native speakers in their production of goal datives, but they

produced more source, benefactive and possessor datives than the BP native speakers. Production of DOCs with arguments that have the role of benefactive can be due to either transfer from English or from Spanish, but over production of source and possessor datives suggests that Spanish grammar influenced the production of both the L1 English and the L1 Spanish speakers. Furthermore, the higher the proficiency of the L1 English participants in Spanish the more they produced 1st person possessor datives.

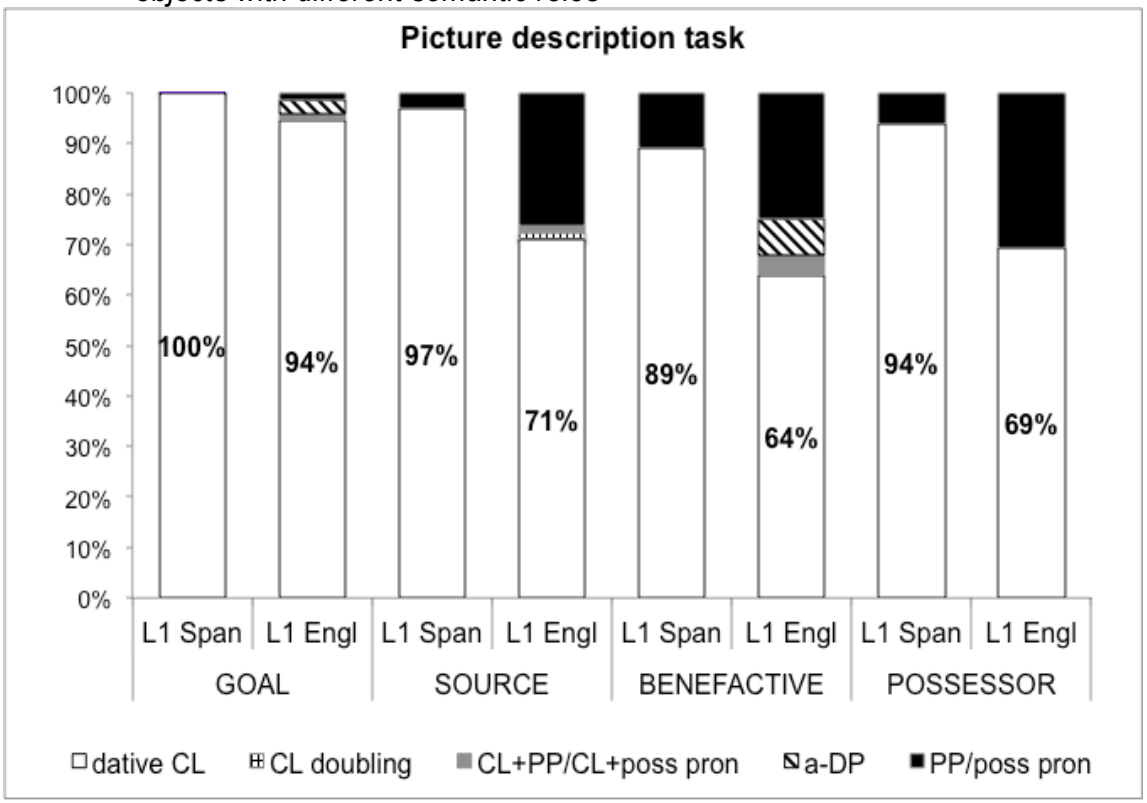
As for the results of the 3rd person context, both groups of L3 learners produced less PPs than BP native speakers when the indirect object had the role of source. Moreover, the L1 English speakers produced significantly more PPs in this category than the L1 Spanish speakers. The L1 Spanish speakers also produced significantly less PPs than the BP native speakers with arguments that had the role of possessor. Because POCs are the only option in English with arguments that have the role of source and possessor and source arguments are rarely expressed by a PP in Spanish, these results indicate that English may have helped the L1 English speakers with source and possessor arguments. It seems that the L1 Spanish speakers relied more on Spanish than the L1 English speakers when producing sentences with source and possessor arguments. On the other hand, the L1 English speakers produced more clitic doubling constructions than the L1 Spanish speakers, which indicates that they were also relying on Spanish. In addition to producing clitic doubling and CL+PP constructions, participants in both groups of learners made other errors that can be traced back to Spanish. They placed the clitic before the auxiliary when verbs were conjugated in the present and the past progressive and used DOM with animate and specific direct objects. Finally, the L1 Spanish speakers, unlike the L1 English speakers,

made incorrect use of the preposition *para* 'for' with source and possessor arguments. These errors suggest that the L1 Spanish speakers assumed that *para* and *a* are both dative case markers in BP and can mark the indirect object with dative case. The prepositions "*a*" and *para* are both possible in BP with goal and benefactive arguments and BP native speakers tend to prefer *para* instead of "*a*". These prepositions are always contentful in BP and can only be used with goal and benefactive arguments because the relation between these two kinds of indirect objects and the direct object can be expressed by the semantic content of both "*a*" and *para*. This possibility may have allowed the L1 Spanish speakers to analyze both "*a*" and *para* in BP as dative case markers that do not have to be related to the semantic role of the indirect object and are used exclusively to mark dative case. Because the meaning of *para* is not compatible with the roles of source and possessor arguments and their relation with direct objects, it can be argued that L1 Spanish speakers do not always consider the semantic content of *para* in BP when they use it.

#### 5.3.3.4. Picture description task in Spanish: results and brief discussion

The purpose of this task was to test L1 English/L2 Spanish speakers' knowledge of clitic doubling and dative clitics in Spanish. First, the production of 18 L1 English speakers will be compared to that of 16 native Spanish speakers. Figure 22 shows mean percentages of each phrase type produced in the 1st person context.

*Figure 22: Percentage of dative and non-dative constructions used to express 1st person indirect objects with different semantic roles*



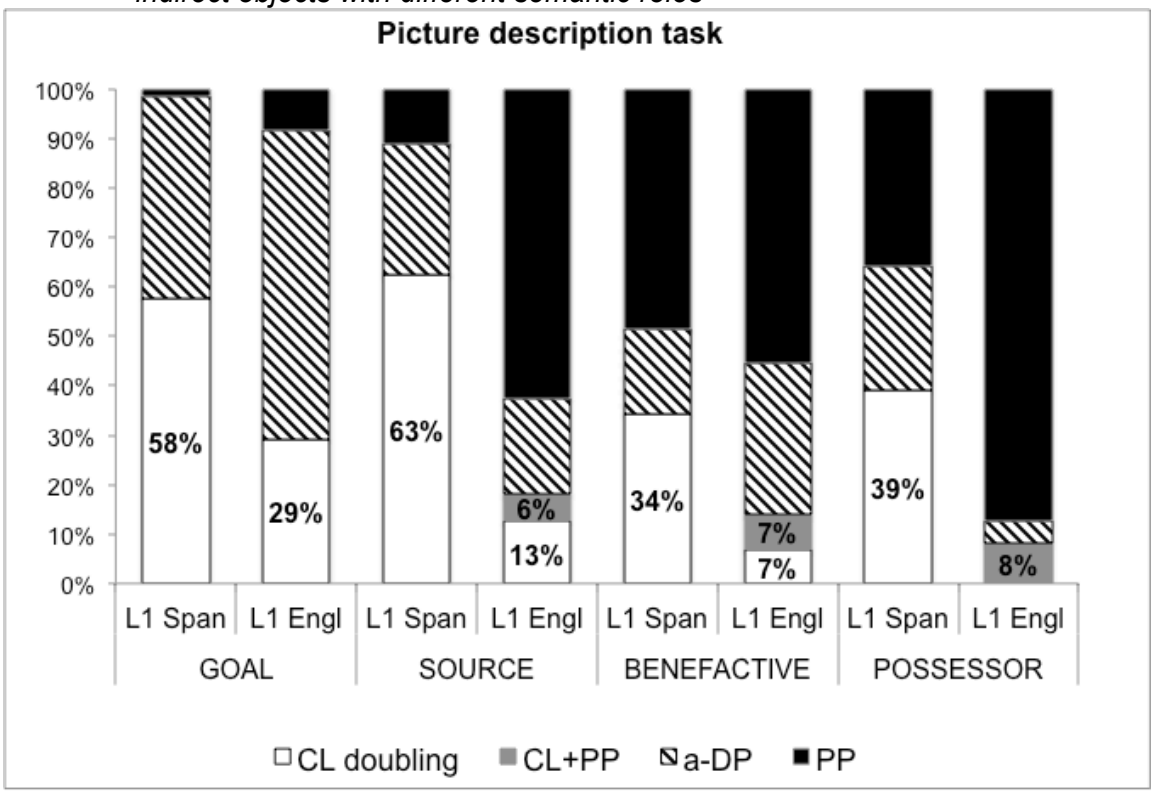

Notes: L1 Port: BP native speakers, L1 Span: native speakers of Spanish, L1 Engl: native speakers of English, CL: clitic, poss pron: possessive pronoun

A repeated-measures ANOVA was used to analyze the production of 1st person dative clitics, with semantic role as the within-subjects variable and group as the between-subjects variable. There was a main effect of semantic role, $F(3,96) = 8.57$, $p < .05$, and contrasts revealed that participants produced significantly more dative clitics with goal indirect objects than with indirect objects that had the roles of source, $F(1,32) = 18.57$, $p < .05$, benefactive, $F(1,32) = 15.87$, $p < .05$, and possessor, $F(1,32) = 15.69$, $p < .05$. There was also a significant difference between the native Spanish speakers and the L2 Spanish speakers, $F(1,32) = 12.22$, $p < .05$, but the interaction between semantic role and group was only marginally significant, $F(3,96) = 2.65$, $p = .053$. L2 Spanish speakers produced less dative clitics than the

native Spanish speakers when the indirect object had the semantic roles of source, benefactive and possessor, but looked very similar to the native speakers when the indirect object was a goal.

Figure 23 displays mean percentages of dative and non-dative constructions produced in the 3rd person context.

*Figure 23: Mean percentages of dative and non-dative constructions used to express 3rd person indirect objects with different semantic roles*




Notes: L1 Port: BP native speakers, L1 Span: native speakers of Spanish, L1 Eng: native speakers of English, CL: clitic,

The use of clitic doubling[51] was analyzed using a repeated-measures ANOVA, with semantic role as the within-subjects factor and group as the between-subjects

[51] Both constructions: the correct form of clitic doubling (CL+a-DP) as well as the incorrect form (CL+PP) produced by the L1 English speakers were considered in the analysis of clitic doubling production.

factor. There was a main effect of semantic role, $F(3,96) = 8.35$, $p < .05$, but no interaction between semantic role and group, $F(3,96) = 1.89$, $p = .14$. Contrasts revealed that participants produced significantly more clitic doubling constructions with goal indirect objects than with benefactive, $F(1,32) = 12.22$, $p < .05$, and possessor indirect objects, $F(1,32) = 10.07$, $p < .05$, but there was no significant difference in the production of goal and source indirect objects, $F(1,32) = .51$, $p = .48$. The between-group analysis revealed a significant difference between the L1 Spanish and the L2 Spanish speakers, $F(1,32) = 9.77$, $p < .05$ due to the fact that the L2 Spanish speakers produced less clitic doubling constructions than the native speakers of Spanish with all kinds of indirect objects.

Although L2 Spanish speakers used dative clitics and clitic doubling in the 1st and the 3rd person contexts, they still made errors in both contexts when producing sentences in which a dative clitic doubled a PP, as in (103) and (105), or a possessive pronoun, as in (104).

(103) Lucía **me** hace un pastel **para mí**.
Lucía DAT CL-1s makes a cake for me
'Lucía bakes me a cake.'
(L1 English, participant # 314)

(104) Mi madre **me** está lavando **mi** pelo.
My mother DAT CL-1s is washing my hair
'My mother is washing my hair.'
(L1 English, participant # 302)

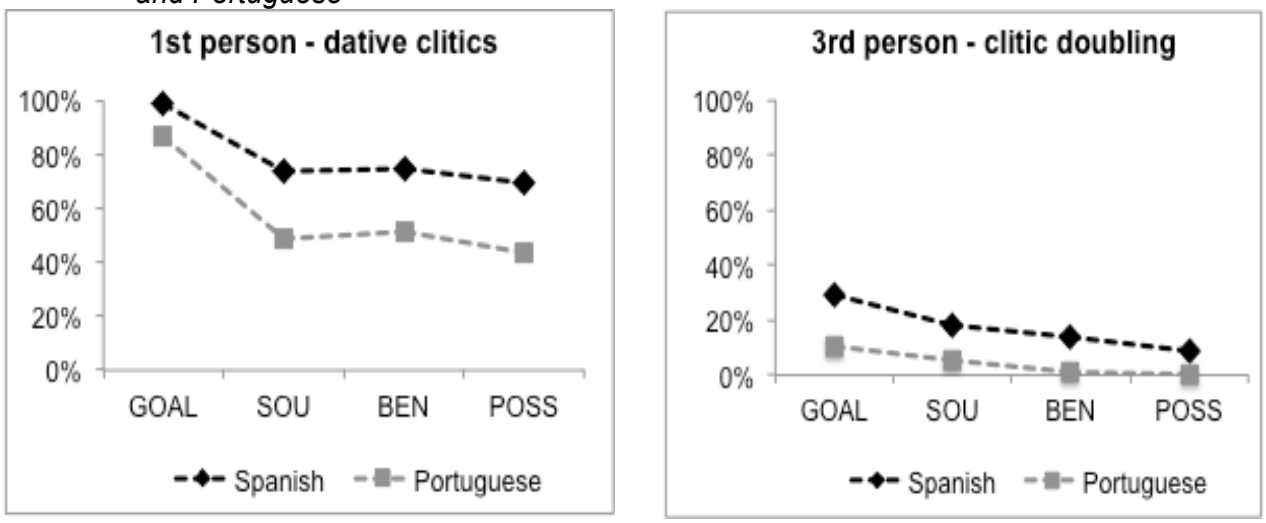
(105) El dentista **le** mira los dientes **del niño**.
The dentist DAT CL-3s looks the teeth of-the boy
'The dentist looks at the boy's teeth.'
(L1 English, participant # 317)

To summarize, the L1 English speakers successfully produced dative clitics and clitic doubling constructions in Spanish although these structures are not part of their native language grammar. However, they still produced less dative constructions than the native Spanish speakers and made errors by using PPs doubled by dative clitics. These constructions were also present in the production of the L1 English speakers in Portuguese, as discussed in Section 5.3.3.3.

#### 5.3.3.5. Comparing the results of the two picture description tasks

To look at whether L3 BP learners think that the usage of dative constructions in Spanish and BP followed a similar pattern, the production of dative clitics and clitic doubling constructions in the two languages was compared for each of the groups. Figure 24 shows a comparison of the mean percentages of dative constructions produced by the L1 English speakers in Spanish and Portuguese. Although the L1 English speakers produced more dative constructions in Spanish than in Portuguese, their production of dative constructions followed a very similar pattern in both languages. There is a decline in the production of dative constructions when goal indirect objects are compared to the other three kinds of indirect objects.

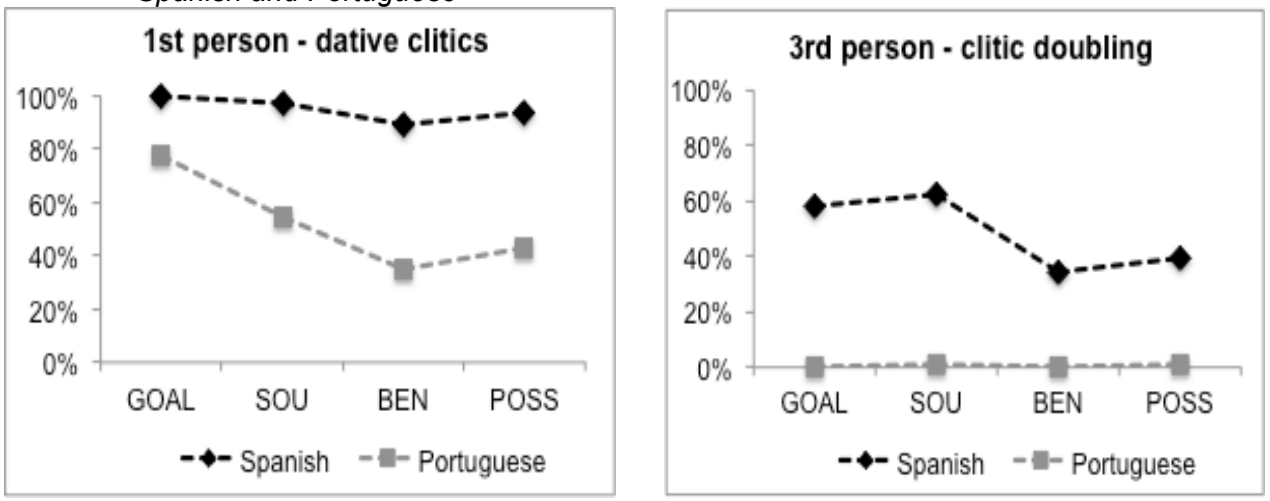
*Figure 24: Percentage of 1st and 3rd person datives produced by L1 English speakers in Spanish and Portuguese*




Notes: GOAL: goal indirect objects, SOU: source indirect objects, BEN: benefactive indirect objects, POSS: possessor indirect objects

Figure 25 shows the percentages of 1st and 3rd person dative constructions produced by the L1 Spanish speakers in their native language and in Portuguese. The L1 Spanish speakers not only produced higher percentages of dative constructions in Spanish than in Portuguese, but their production of datives did not follow the same pattern in both languages. Whereas the production of 1st person dative clitics did not vary much in Spanish, regardless of the semantic role of the indirect object; in Portuguese there was a decline in the production of 1st person dative clitics when goal indirect objects was compared to the other three kinds of indirect objects. On the other hand, the native speakers of Spanish produced higher percentages of clitic doubling with goal and source arguments than with benefactive and possessor arguments in Spanish, but almost did not produce clitic doubling in Portuguese with all kinds of indirect objects.

*Figure 25: Percentage of 1st and 3rd person datives produced by L1 Spanish speakers in Spanish and Portuguese*




Notes: GOAL: goal indirect objects, SOU: source indirect objects, BEN: benefactive indirect objects, POSS: possessor indirect objects

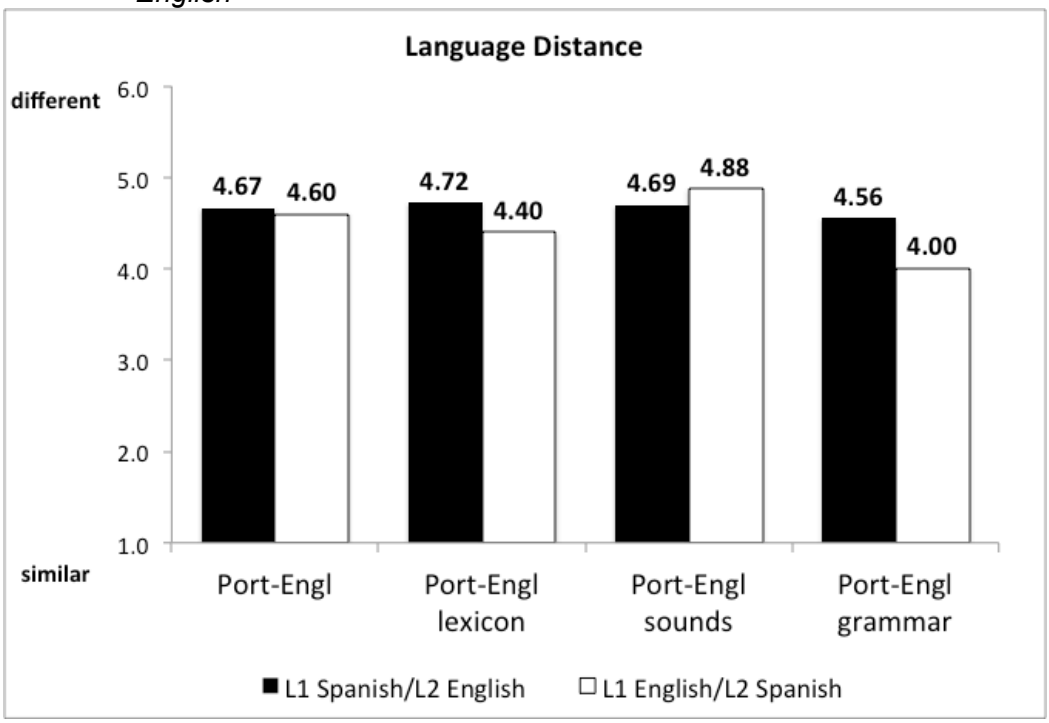
To summarize, whereas the L1 English group followed a very similar pattern in their production of dative constructions in Spanish and Portuguese, the L1 Spanish group made a greater distinction between the two languages and showed a different pattern in the production of dative constructions in the two languages.

#### 5.3.3.6. Language distance questionnaire

This questionnaire was developed with the intention of measuring learners' perception about the linguistic distance between Spanish and Portuguese and between English and Portuguese and to look at whether cross-linguistic influence is related to learners' perception of language proximity. After the data was collected, numbers from 1 to 6 were attributed to each point of the Likert scale used. Lower numbers indicated that the language pairing was perceived as similar and higher numbers indicated that they were perceived as different. Means ratings for each linguistic level of each language pairing were used to perform statistical analyses.

Figure 26 displays mean ratings of the statements that referred to the distance between Portuguese and English.

*Figure 26: Mean ratings of the statements that tested for the distance between Portuguese and English*



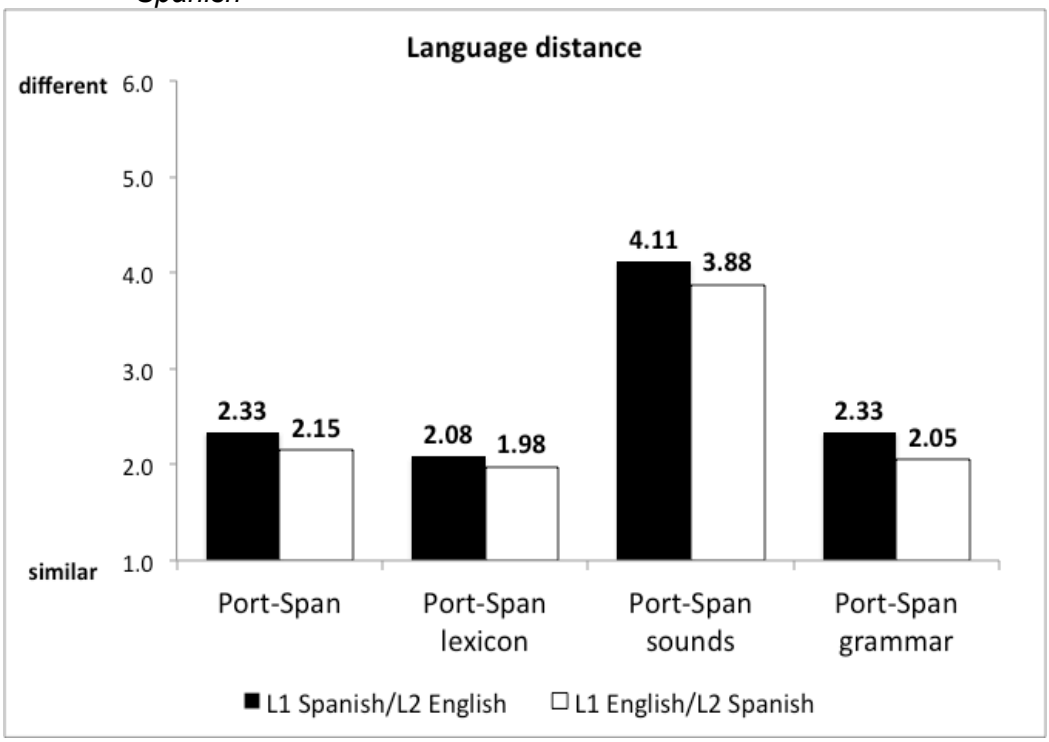

Notes: Port: Portuguese, Engl: English

Two repeated-measures ANOVAS were used to analyze the results of the language distance questionnaire. This first ANOVA compared the mean ratings of the statements that tested for the perception of distance between Portuguese and English. Linguistic level (general, lexicon, sounds and grammar) was the within-subjects factor and group was the between-subjects factor for both analyses. The results of the first ANOVA revealed a marginally significant main effect of linguistic level is: $F(3,108) = 2.53$, $p = .06$. Contrasts indicated that the perception of a more general distance between the two languages did not differ significantly from the perception of distance at the level of lexicon, $F(1,36) = .23$, $p = .63$, sounds, $F(1,36) = .60$, $p = .44$, and grammar,

F(1,36) = 2.73, p = .11. Furthermore, there was neither a significant difference between the groups, F(1,36) = .67, p = .42, nor a significant interaction between linguistic level and group: F(3,108) = 1.42, p = .24.

Figure 27 displays mean ratings of the statements that referred to the distance between Portuguese and Spanish.

*Figure 27: Mean ratings of the statements that tested for the distance between Portuguese and Spanish*




Notes: Port: Portuguese, Span: Spanish

The second ANOVA compared the ratings of the statements that tested for the perception of distance between Portuguese and Spanish. There was a main effect of linguistic level, F(3,108) = 54.92, p < .05, and contrasts indicated that Spanish and Portuguese were perceived as closer at a more general level as at the level of lexicon, F(1,36) = 1.77, p = .19, and grammar, F(1,36) = .10, p = .75. However, the two languages were perceived as significantly more similar at a general level than at the

phonological level, F(1,36) = 75.60, p < .05. There was neither a significant difference between the groups, F(1,36) = .74, p = .40, nor a significant interaction between linguistic level and group, F(3,108) = .9, p = .96.

Finally, two paired-samples t-tests were performed in the ratings of the L1 English and the L1 Spanish groups separately (Bonferroni corrections were used to avoid inflating Type I error). These analyses intended to compare the perceived distance between Portuguese and Spanish and between Portuguese and English for each group. The pairwise comparisons on the ratings of the L1 Spanish group revealed that participants in this group perceived Spanish and Portuguese as significantly more similar than English and Portuguese at all linguistic levels but at the phonological level. The pairwise comparisons on the ratings of the L1 English group indicated that the participants in this group perceived Spanish and Portuguese as significantly more similar than English and Portuguese at all linguistic levels. The results of both paired-samples t-tests are displayed in Table 27.

*Table 27: Results of the two paired-samples t-tests performed on the results of the language distance questionnaire*

| Pairs | L1 Spanish/L2 English | L1 English/L2 Spanish |
|---|---|---|
| Port-Engl and Port-Span | t(17) = 7.71, p < .05 | t(19) = 8.32, p <.05 |
| Port-Engl vocab and Port-Span vocab | t(17) = 9.98, p < .05 | t(19) = 10.67, p <.05 |
| Port-Engl sounds and Port-Span sounds | t(17) = 1.62, p =.12 | t(19) = 4.30, p <.05 |
| Port-Engl grammar and Port-Span grammar | t(17) = 7.03, p < .05 | t(19) = 6.52, p <.05 |

In addition to completing the language distance questionnaire, all L3 learners had to answer three questions in the language background questionnaire about their process of learning Portuguese and how it is related to other languages they know.

- Do you rely on languages you already know when speaking/writing in Portuguese?

- Which language(s) help(s) you? Why?

- Which language(s) do(es) not help you? Why?

All 18 native Spanish speakers answered “yes” to question 1) and 14 of them added that Spanish helps them when they are speaking and writing in Portuguese. Among the other four L1 Spanish speakers, two stated that both English and Spanish help them, one mentioned Spanish and French, and one cited only French. All participants who mentioned Spanish as the most helpful language justified their answer by reporting that Spanish and Portuguese have a lot of similarities. None of the L1 Spanish speakers brought up proximity between Portuguese and English. With respect to question 3), nine L1 Spanish speakers stated that English does not help them, three mentioned Spanish, one mentioned Spanish and Italian, one mentioned English and German and one cited German. The remaining three native speakers of Spanish stated that all languages help them. Among the L1 Spanish speakers who mentioned Spanish as a language that does not help them, three argued that similarities lead them to making more errors or make it more difficult for them to keep the two languages apart. A total of four L1 Spanish speakers who mentioned English as a language that does not help them, stated that English and Portuguese are very different or have very different grammars. The L1 Spanish speakers who stated that all previously known languages helped, reported that the process of learning any foreign language is very similar.

When the L1 English speakers were asked the same three questions, they all answered that they do rely on other languages they know when they speak or write in

Portuguese. All 20 L1 English speakers mentioned Spanish as one of the languages that helps them express themselves in Portuguese: 10 mentioned Spanish as the language that helps the most, three mentioned both English and Spanish, three included Spanish and English among other languages they know and four mentioned Spanish and other Romance language they know, being them either French or Italian. Fourteen of all L1 English speakers explained that Spanish helps them because Spanish and Portuguese are very similar in vocabulary and grammar. Among the L1 English speakers who cited English as a helpful language, 3 claimed that English and Portuguese are similar languages and that English helps them mainly with vocabulary. As for the languages that do not help their expression in Portuguese, three L1 English speakers mentioned English, one mentioned English and Arabic, seven cited other languages they have studied (e.g. German, Japanese, Hebrew, Latin and Catalan), one stated that English helps less than Spanish, three explained that Spanish does not help and five stated that all languages help. The L1 English speakers who mentioned Spanish as a non-helpful language, also stated that this is because of similarities between Spanish and Portuguese, as exemplified in this response (106). The participants who stated that English does not help them explained that Portuguese and English are very different, which makes it difficult to think about English in relation to Portuguese.

(106) “Spanish - it both helps me and hurts me. It helps mainly when I'm trying to say something I've never said before, and then I can guess from what I know of Spanish vocabulary. It hurts me in the same way, sometimes I know a word in Portuguese but, because I speak Spanish much more, I get confused.”
(L1 English, participant # 338)

To summarize, both groups of L3 BP perceived Portuguese and Spanish as more similar than Portuguese and English, and there was no difference between the ratings of the two groups. In the answers to open-ended questions about which languages helped and which did not help them in their expression in Portuguese, all participants in the L1 English group and 17 in the L1 Spanish group mentioned Spanish as a language that helps them and stated that they rely on Spanish when writing and speaking in Portuguese. Seventeen L1 Spanish speakers and 14 L1 English speakers explained that Spanish helps due to proximity between Portuguese and Spanish. However, four L1 Spanish and three L1 English clarified that similarities between Spanish and Portuguese also lead to errors. The two L3 groups were more different in their perception about the role of English. Six L1 English speakers stated that English helps them whereas only two L1 Spanish speakers mentioned English as a helpful language. Nine L1 Spanish speakers stated that English does not help them, whereas only four L1 English speakers included English as a non-helpful language. Regarding their explanations, four L1 Spanish speakers argued that they do not rely on English because English and Portuguese are different and two L1 English speakers used similar arguments. A comparison between the results of the language distance questionnaire and the answers to the open-ended questions suggests that both groups were very similar in establishing numerical distances between Spanish and Portuguese and English and Portuguese, and also on their statements about the role of Spanish in their expression and acquisition of Portuguese. However, when discussing the influence of English in their expression in Portuguese, six L1 English speakers recognized that English is helpful and 3 of them claimed that this is due to proximity between English

and Portuguese, whereas only two L1 Spanish speakers mentioned that English helps them and none of them relate it to similarities between the two languages.

Possible relations between the perception of language distance and language transfer will be presented and discussed in Section 5.3.3.7 below.

#### 5.3.3.7. Analysis of cross-linguistic influence

To analyze whether transfer from either English or Spanish is related to order of acquisition, language proficiency and perception of linguistic distance between English and Portuguese and between Spanish and Portuguese, a measure of cross-linguistic influence from each language was calculated based on the answers that the L3 learners gave to specific categories of the experimental tasks. To measure influence from English the ratings of English-type DOCs in the GJT was the only category used because the L3 learners did not produce English-type DOCs in the picture description task. Although it can be argued that production of POCs when indirect objects are source or possessor were due to positive transfer from English, it is not possible to tease apart positive transfer from acquisition with the methodology used in this study. To analyze influence from Spanish, ratings of clitic doubling constructions in the GJT and possessor clitics in the AJT were used. Both constructions received low ratings by the BP native speakers. Influence from Spanish could also be attested in the picture description task. Production of clitic doubling, dative possessors and a+DP with source and possessor arguments were also included as instances of transfer from Spanish. To establish a measure of cross-linguistic influence within the categories that belonged to the AJT and the GJT, the mean rating of the BP native speakers for English-type DOCs,

clitic doubling constructions and dative possessors were subtracted from the mean ratings of each L3 learner for the same categories. In other words, the distance between the L3 BP learners' judgments of certain categories and the BP native speakers' judgments of the same categories was used as a measure of transfer from Spanish and English. Finally, to have only one value per L3 BP learner that indicated transfer from Spanish in the judgment tasks, the values obtained for the clitic doubling category and the possessor dative category were averaged.

To compute cross-linguistic influence in oral production, every instance of production of clitic doubling,[52] possessor dative clitics and a+DPs with source and possessor arguments was computed as a case of transfer from Spanish. This is because BP native speakers never produced clitic doubling, or a+DPs with source and possessor arguments and produced 1st person dative clitics with the role of possessor only 3% of the time. To obtain a single value that reflected transfer from Spanish in oral production, instances of transfer were averaged for each L3 BP learner. Thus, every L3 BP learner had one measure of influence from English in the judgment tasks and two measures of influence from Spanish: one in the judgment tasks and another one in the picture description task. Because the values obtained from the judgment tasks and those obtained from the picture description task were computed in different ways and had different meanings, it was not possible to have one single value of transfer from Spanish for each L3 BP learner.

[52] Both CL+PP and CL+a-DP were computed in the measure of transfer from Spanish in oral production.

After measures of transfer from English and Spanish were computed, linear regressions were used to analyze which factors: L1, proficiency in the L2, proficiency in the L3 or perception of language distanced could predict transfer from each of these languages. Initially three multiple regressions analyses were carried out to determine how L1, proficiency in BP and perception of language distance related to language transfer. For the first regression, transfer from English was the dependent variable and L1, perceived distance between English and Portuguese, and BP proficiency scores were the independent variables. The results indicated that L1, perceived distance between English and Portuguese and proficiency in BP together accounted for 19% of the variance in transfer from English. Transfer from English was significantly related to the native language of the L3 learners, $r = .30$, $p < .05$, indicating that the L1 English speakers transferred more from English than the L1 Spanish speakers. Transfer from English was also related to proficiency in BP, $r = –.29$, $p < .05$, indicating that the higher the score in the Portuguese proficiency test the lower the value for transfer from English. However, transfer from English was not related to perception of distance between English and Portuguese, $r = –.12$, $p = .23$.

For the second regression, transfer from Spanish in the judgment tasks was the dependent variable and L1, perceived distance between Spanish and Portuguese and BP proficiency scores were the independent variables. The results indicated that these factors were not related to transfer from Spanish in the judgment tasks. For the third regression, the independent variables were the same but the dependent variable was transfer from Spanish in the picture description task. The results indicated that the three factors together accounted for only 16% of the variance in transfer from Spanish in oral

production. Transfer from Spanish in the picture description task was significantly related only to BP proficiency scores, $r = –.34$, $p < .05$, indicating that the higher the score in the Portuguese proficiency test the lower the value for transfer from Spanish. Nevertheless, there was no relation between transfer from Spanish in oral production and the L1 of the L3 BP learners, $r = –.08$, $p = .31$, and transfer from Spanish and perception of distance between Portuguese and Spanish, $r = .22$, $p = .09$.

Regressions to analyze each L3 group separately were also performed. Two regressions were performed to analyze whether language proficiency and/or perception of language distance can explain the patterns of transfer from English: one in each L3-BP group. The first regression was performed in the L1 English group, with transfer from English as the dependent variable and scores in the BP proficiency test and perception of distance between Portuguese and English as the independent variables. Results revealed that these two factors could not explain transfer from English among native English speakers. There was no significant relation between transfer from English and proficiency in Portuguese, $r = –.13$, $p = .30$, nor between transfer from English and perception of distance between English and Portuguese, $r = –.19$, $p = .21$. A similar regression was carried out within the L1 Spanish group. For this regression scores in the English proficiency test were also included as another independent variable. Results indicated that proficiency in English and Portuguese accounted for 51% of the variation in transfer from English. Scores in the English proficiency test were related to transfer from English, $r = .63$, $p < .01$, indicating that the higher the level of proficiency in English the more the L1 Spanish speakers transferred from English. Scores in the Portuguese proficiency test were significantly related to transfer from English, $r = –.47$, $p < .05$,

indicating that the L1 Spanish speakers with higher proficiency in Portuguese transferred less from English. No relation between transfer from English and perception of distance between English and Portuguese was found, r = –.01, p = .48.

To analyze whether language proficiency and perception of language distance could explain the patterns of transfer from Spanish, four regressions were performed. The first two regressions were performed in the L1 English group. In the first one transfer from Spanish in the judgment tasks was the dependent variable and scores in the Spanish proficiency test, scores in the Portuguese proficiency test and perception of language distance between Spanish and Portuguese were the independent variables. Results indicated that these factors could not account for the variance found in transfer from Spanish in the judgment tasks. Measures of transfer from Spanish did not correlate with level of proficiency in Spanish, r = .11, p = .32, with level of proficiency in Portuguese, r = –.01, p = .49, nor with perception of distance between Spanish and Portuguese, r = –.04, p = .43. A second regression with transfer from Spanish in oral production was conducted within the L1 English group. Once more, results revealed that language proficiency and perception of language distance were not good predictors of transfer from Spanish among native English speakers. No correlations were found between transfer from Spanish in the picture description task and proficiency in Spanish, r = .33, p = .08, proficiency in Portuguese, r = –.10, p = .35, and perception of distance between Spanish and Portuguese, .29, r = .12.

Two similar regressions were performed within the L1 Spanish group. The first one had transfer from Spanish in the judgment tasks as the dependent variable and proficiency in Portuguese and perception of language distance between Spanish and

Portuguese as the independent variables. The results indicated that none of these factors account for the variation found in transfer from Spanish among native Spanish speakers in judgment tasks. The second regression had transfer from Spanish in oral production as the dependent variable and the same independent variables as the previous regression. Results revealed that proficiency level in Portuguese explained 35% of the variation found in transfer from Spanish. Proficiency in Portuguese is significantly correlated with transfer from Spanish in oral production, $r = –.59$, $p < .01$, which suggests that the L1 Spanish speakers who were more proficient in Portuguese transferred less from Spanish when they had to produce sentences orally. There was no relation between perception of distance between Portuguese and Spanish and transfer from Spanish in the picture description task, $r = .14$, $p = .29$.

Table 28 summarizes the results of the regressions performed in each of the L3 BP group.

*Table 28: Summary of the regression analyses performed in each L3 BP group for transfer from English and Spanish in the judgment tasks (JTs) and transfer from Spanish in the picture description task (PDT)*

| | **L1 English/L2 Spanish** | **L1 Spanish/L2 English** |
|---|---|---|
| Transfer from English in the JTs | proficiency in Portuguese: **NO** | proficiency in Portuguese: **YES** |
| | | proficiency in English: **YES** |
| | Port-Engl distance: **NO** | Port-Engl distance: **NO** |
| Transfer from Spanish in the JTs | proficiency in Portuguese: **NO** | proficiency in Portuguese: **NO** |
| | proficiency in Spanish: **NO** | |
| | Port-Span distance: **NO** | Port-Span distance: **NO** |
| Transfer form Spanish in the PDT | proficiency in Portuguese: **NO** | proficiency in Portuguese: **YES** |
| | proficiency in Spanish: **NO** | |
| | Port-Span distance: **NO** | Port-Span distance: **NO** |

Individual analyses considering the measures of transfer from English and Spanish were also conducted in both L3 groups. For these analyses, first it was determined whether there was transfer or not in each category. To decide whether transfer took place, different criteria were used for the categories of the judgment tasks and the picture description task. For the former, if the participant accepted 3 or 4 sentences with English-type DOCs, she was included in the group of learners who transferred from English. If she accepted only 1 or 2, she was included in the group that did not transfer from English. The same procedure was done for judgments of clitic doubling and possessor datives to determine transfer from Spanish. As previously mentioned, none of the L3 BP learners used English-type DOCs in the picture description task, so it was not possible to clearly define transfer from English in oral production. To determine transfer from Spanish in the picture description task, only structures that are perfectly possible in Spanish but not acceptable in BP were considered: clitic doubling, possessor datives, and a+DPs with arguments that had the roles of either source or possessor.

As already revealed by the results of the regression analyses, more L1 English speakers than L1 Spanish speakers transferred from English. Table 29 shows the number of L1 English speakers who did and did not transfer from English.

*Table 29: Transfer from English among the L1 English speakers*

| Transfer from English | # of participants | Mean BP proficiency score | Mean Engl-Port distance (1-6 scale) |
|---|---|---|---|
| YES | 12 | 83% | 4.26 |
| NO | 8 | 77% | 4.71 |

A one-way ANOVA was performed to compare the L1 English speakers who transferred with those who did not transfer from English, with mean score in the BP proficiency test and perception of distance between English and Portuguese as the dependent variables. The results revealed that there is no difference between the two groups in their level of proficiency in Portuguese, $F(1,18) = 1.53$, $p = .23$, nor in their perception of English-Portuguese distance, $F(1,18) = 2.46$, $p = .13$. Although the number of participants in each of these groups is small and this statistical analysis has to be taken with caution, it is important to highlight that these results are compatible with the regression analyses described above.

Table 30 shows the number of native Spanish speakers who did and did not transfer from English.

*Table 30: Transfer from English among the L1 Spanish speakers*

| Transfer from English | # of participants | Mean BP proficiency score | Mean English proficiency score | Mean Engl-Port distance (scale 1-6) |
|---|---|---|---|---|
| YES | 6 | 76% | 90% | 4.54 |
| NO | 12 | 81% | 75% | 4.72 |

Another one-way ANOVA was performed to compare the L1 Spanish speakers who transferred from English with those who did not. Scores in the BP proficiency and the English proficiency tests, as well as the perceived distance between English and Portuguese were the dependent variables. There was a significant difference between the groups in their level of proficiency in English, $F(1,16) = 4.75$, $p < .05$, but no difference in their level of proficiency in Portuguese, $F(1,16) = .91$, $p = .35$, nor in perception of distance between English and Portuguese, $F(1,16) = .15$, $p = .70$. Furthermore, the L1 Spanish speakers who transferred from English were all living in

the U.S. at the time of testing,[53] whereas within the group of L1 Spanish speakers who did not transfer from English, there were four learners who were living in the U.S. and eight who were living in Brazil. Finally, once again, these results corroborate the results of the regression analyses described above, which also suggested that transfer from English among the L1 Spanish speakers was related to level of proficiency in English.

Regarding transfer from Spanish, there was a very small number of participants who did not transfer from Spanish at all: only one participant in the L1 Spanish group and two in the L1 English group. Thus, within each L1 group, participants had to be divided according to level of transfer from Spanish: low transfer and high transfer. Low transfer learners were those who transferred in up to three categories out of the 8 categories in which transfer from Spanish was attested, including categories of the judgment tasks and those of the picture description task. The L3 learners who transferred in four or more categories were included in the group of high transfer. Table 31 displays the number of low and high transfer learners among the L1 Spanish speakers.

*Table 31: Transfer from Spanish among the L1 Spanish speakers*

| Transfer from Spanish | # of participants | Mean BP proficiency score | Mean Span-Port distance (1-6 scale) |
|---|---|---|---|
| High transfer | 11 | 76% | 2.84 |
| Low transfer | 7 | 85% | 2.71 |

[53] Although these L1 Spanish speakers were highly proficient in English and were living in the U.S. when they were tested, they all moved to this country as adults. Moreover, they all reported that the language they were more fluent in was Spanish.

A one-way ANOVA was performed to compare the low and the high transfer groups within the L1 Spanish group. Scores in the BP proficiency test and perceive distance between Spanish and Portuguese were the two dependent variables. There was no difference between the groups in their proficiency in Portuguese, $F(1,16) = 2.6$, $p = .13$, nor in perception of distance between Spanish and Portuguese, $F(1,16) = .11$, $p = .75$. However, it is worth noticing that among the three L1 Spanish speakers who transferred the least from Spanish, two were very proficient in Portuguese and two were among the ones who perceived Spanish and Portuguese as relatively distant languages.

Table 32 displays the number of native English speakers who had low and high rates of transfer from Spanish.

*Table 32: Transfer from Spanish among the L1 English speakers*

| Transfer from Spanish | # of participants | Mean BP proficiency score | Mean Spanish proficiency score | Mean Span-Port distance (scale 1-6) |
|---|---|---|---|---|
| High transfer | 8 | 79% | 87% | 2.89 |
| Low transfer | 11 | 80% | 86% | 2.31 |

Another one-way ANOVA was carried out to compare the high and the low transfer groups among the L1 English speakers. Scores in the BP proficiency and the Spanish proficiency tests and perceived distance between Spanish and Portuguese were included as the dependent variables. There was a marginally significant difference between the two groups in their perception of distance between Spanish and Portuguese, $F(1,17) = 3.97$, $p = .06$, but no difference in proficiency in Portuguese, $F(1,17) = .03$, $p = .87$, and proficiency in Spanish, $F(1,17) = .63$, $p = .81$. Despite the absence of difference in level of proficiency in Spanish between the low and the high

transfer groups, the two L1 English speakers who did not transfer at all from Spanish had very low proficiency level in Spanish.

In summary, the analyses of transfer from English and Spanish into Portuguese suggest that the L3 BP learners transferred from both languages. However, more transfer from English was attested among the L1 English speakers and a greater number of L1 Spanish speakers had high levels of transfer from Spanish. This suggests that the L1 has an important role in morphosyntactic transfer in L3 acquisition. Regarding cross-linguistic influence from English into Portuguese, the L1 Spanish speakers who transferred from English had high English proficiency levels and were living in the U.S. at the time of testing. Therefore, proficiency in the L2 seems to play an important role in language transfer, at least when the L2 and the L3 are not perceived as closely related languages and when level of proficiency is combined with recency of use. Regarding cross-linguistic influence from Spanish, there was a great variation among all the L3 BP learners and none of the factors were clearly related to transfer from Spanish for any of the two L3 groups. Level of proficiency in Spanish was not related to transfer from Spanish for the L1 English speakers and level of proficiency in Portuguese was inversely correlated to transfer from Spanish only in the oral production of the L1 Spanish speakers. Furthermore, perception of language distance between Spanish and Portuguese and between English and Portuguese only showed that all L3 learners perceived Spanish and Portuguese as closer than English and Portuguese. However, at the individual level results suggest that perception of language distance did not affect cross-linguistic influence from either English or Spanish. Thus, whereas the L3 BP learners who transferred from English into Portuguese were either L1 English

speakers or had a high proficiency level in English and used English in their every-day life, almost all L3 BP learners transferred from Spanish into Portuguese. Variation in amount of transfer seems to be unrelated to native language, proficiency in Spanish or perception of language distance between Spanish and Portuguese. In Chapter 6 results will be discussed more in depth and conclusions will be presented.

# Chapter 6:

# Discussion, Conclusions and Implications

## 6.1. Introduction

The two main goals of this thesis were: 1) to describe and analyze the dative alternation in BP, and 2) to investigate the acquisition of its properties by L1 English/L2 Spanish speakers and L1 Spanish/L2 English speakers who are learning Portuguese as an L3.

The dative alternation is a linguistic phenomenon present not only in Portuguese, but also in Spanish and English. As detailed in Chapter 2 and summarized in Chapter 5, in English, Spanish and BP, POCs (V DP PP) can alternate with DOCs. Whereas POCs have the same syntactic structure and look the same in the spell-out in the three languages, as illustrated in (107), (108) and (109), there is variation in morphosyntactic and semantic restrictions in the DOC counterparts. The V $DP_{recipient}$ $DP_{theme}$ structure, as in (110), is only possible in English, whereas the clitic doubling construction with the indirect object introduced by the dative case marker *a* (a-DP) and doubled by a dative clitic, as in (111), is only possible in Spanish. In both languages DOCs are possible with goal and benefactive indirect objects, but only Spanish allows DOCs with source and possessor indirect objects. The grammatical properties of the dative alternation in BP constitute a subset of these two grammars combined. BP has dative clitics, like Spanish, but only $1^{st}$ and $2^{nd}$ person goal arguments are productively expressed by a dative clitic in both formal and colloquial registers, as in (112). BP native speakers prefer POCs with

3rd person goal arguments and with source, benefactive and possessor arguments in informal discourse. That is, English and BP coincide in their preference for POCs, at least when the indirect object is the source or the possessor of the direct object.

(107) John gave the book to Mary. (English POC)

(108) Juan dio el libro a María. (Spanish POC)
'Juan gave the book to María.'

(109) O João deu o libro para a Maria. (BP POC)
'João gave the book to Maria.'

(110) John gave Mary the book. (English DOC)

(111) Juan le dio el libro a María. (Spanish dative construction)
Juan DAT CL-3s gave the book DAT case marker María
'Juan gave María the book.'

(112) O João me deu o libro. (BP dative construction)
the João DAT CL-1s gave the book
'João gave me the book.'

Because the dative alternation in BP has not received much attention in the literature, a more detailed description and analysis was necessary before the acquisition of properties of the dative alternation was pursued. The analysis of properties of the dative alternation in BP, presented in Chapter 3, was based on results obtained in two experimental studies. The methodology used in these studies was developed to answer the following research questions.

1) What kind of predicates still allow dative constructions in BP and why?

2) What is the status of a+DPs in the Portuguese spoken in Brazil? Are they dative constructions, as in the Portuguese spoken in Portugal, or PPs?

3) What is the morphosyntactic status of the dative clitics that are still productively used in BP? Are they added to the argument structure of the verb by an applicative head or they merge within the root domain?

In Study 1, 19 BP native speakers completed a written AJT and in Study 2, a different group composed of 24 BP native speakers completed a written AJT and a picture description task. In Study 2, the motivation to include a written and an oral task was related to differences in the use of datives in colloquial vs. formal BP. Findings of Study 1 and Study 2 are presented and discussed in more detail in Chapter 3 and are summarized in Section 6.2 below.

To investigate the acquisition of the dative alternation in L3 BP, a similar experimental design was used. L3 BP learners completed the same tasks used in Study 2 in addition to a GJT and a picture description task in Spanish. The GJT looked at whether BP learners could distinguish between grammatical vs. ungrammatical structures in BP, being the ungrammatical sentences possible in either English (English-type DOCs) or Spanish (clitic doubling). On the other hand, the AJT looked at whether these learners were sensitive to the use of dative constructions in BP depending on the semantic role of the indirect object (goal, source, benefactive or possessor). Because the GJT and the AJT were both untimed and were presented in written format, they were more metalinguistic and taped more into the learners' knowledge of written discourse. The picture description task in Portuguese, on the other hand, not only tested knowledge of the colloquial variety of BP, but it also intended for learners to be less focused on prescriptive rules and more concentrated on conveying a certain meaning. The picture description task in Spanish examined whether L2 Spanish speakers

acquired dative constructions in Spanish and were comparable to Spanish native speakers in the use of datives. The combination of different types of tasks and modalities was not only more appropriate to investigate the acquisition of a linguistic phenomenon whose properties are restricted by register, but it also allowed a more in-depth analysis of cross-linguistic influence in L3 acquisition.

In addition to the experimental tasks, L3 BP learners also completed a language distance questionnaire, which was specifically designed to assess their perception of the distance between Spanish and Portuguese and between English and Portuguese. To the best of my knowledge, this is the first time that perception of language distance is not assumed based on genetic relatedness and/or typological proximity, but it is discussed based on empirical evidence.

This experimental methodology was used to answer the following research questions.

1) Are L3 BP learners sensitive to morphosyntactic properties of the dative alternation in BP?
2) Do L3 BP learners transfer properties from either English or Spanish to BP?
3) If transfer is observed, do order of acquisition and/or (perceived) language proximity play a role in language transfer when learning an L3?

By testing for language transfer from either English or Spanish and comparing the results of language transfer with the learners' perception of distance between Spanish and Portuguese and between English and Portuguese, this study contributes to a crucial debate in the field of L3 acquisition. First, the results of this study present further evidence that cross-linguistic influence from previously known languages is a

crucial aspect in the acquisition of morphosyntax by multilingual speakers. Second, it combines different kinds of tasks to evaluate and discuss the role of order of acquisition and (perceived) language proximity in the acquisition of an L3. Finally, it incorporates a questionnaire to empirically assess perception of language distance, which helps to shed light on the debate of whether transfer comes primarily from the language perceived as closer to the target language or from the language that is typologically or genetically closer to the target language.

The findings of the two studies conducted with BP native speakers presented in Chapter 3, and the study comparing L3 BP learners with BP native speakers presented in Chapter 5 are summarized in Section 6.2. The results of the study on L3 BP acquisition are further discussed in Section 6.3 and final conclusions are presented in Section 6.4.

## 6.2. Summary of findings

### 6.2.1. Properties of the dative alternation in BP and implications for non-native acquisition

The results of empirical data collected among L1 BP speakers confirm that only 1st and 2nd person datives with the role of goal are still productive in written and oral discourse. Third person dative clitics and datives with the roles of benefactive and source are accepted in written and formal register but are seldom produced in oral and colloquial discourse by BP native speakers. Possessor datives are no longer available in the BP grammar, as estimated from both the production and the acceptability data. This indicates that BP is losing the 3rd person dative clitic and the possibility of

expressing 1st and 2nd person indirect objects with dative clitics when they are not core arguments of the verb.

Because this is a linguistic phenomenon that is undergoing a process of language change, learners of BP as a non-native language may be exposed to variable input. In written formal BP, 3rd person dative clitics and source and benefactive datives are still used, whereas in the colloquial register POCs are much more frequent. That is, evidence from the formal discourse is different of that from the colloquial discourse. According to the Variational Learning Hypothesis, proposed for L1 acquisition in Yang (2002) and extended to L2 acquisition in Slabakova (2008), parameter (re)setting depends on statistical properties of the input. If the learner is exposed to a high percentage of sentences in the input that exhibit the same parameter value, acquisition will happen earlier, but if the learner is exposed to ambiguous input, she may take longer to (re)set the parameter. This is precisely what happens to BP learners who are acquiring properties of the dative alternation in BP, because they are exposed to different evidence in colloquial and formal registers. Therefore, it is expected that the dative alternation in BP will be difficult to acquire and its acquisition take longer.

Regarding more specifically the use of 3rd person dative clitics, non-native learners of BP may also be exposed to conflicting information depending on whether their instructors or textbooks are relying more heavily on language use and colloquial register or on prescriptive rules and the written variety of BP. To my knowledge, use of DOCs vs. POCs with indirect objects that have different semantic roles is not explicitly taught in Portuguese as a foreign language courses. On the other hand, form and meaning of clitics are more frequently incorporated in the content of textbooks and

classes. Therefore, BP learners are likely to be exposed to the full paradigm of clitic pronouns and to examples of sentences with dative clitics that are only possible in literary or very formal written texts in BP. Because the colloquial and the formal varieties of BP do not differ exclusively on the use of datives but on other grammatical aspects (e.g. clitic placement, object and subject expression, agreement), learners of Portuguese as a non-native language will be exposed to variable input with respect to at least a few grammatical aspects.

Finally, because all L3 learners who participated in this study had POCs in either their L1 or their L2 and the L1 English speakers showed that they acquired Spanish dative clitics and productively used them, it can be claimed that the L3 learners did not have to acquire new grammatical properties in order to master the dative alternation in BP. Their acquisition task consisted basically of learning how to accommodate the grammatical structures that they had already acquired to the L3 input, by limiting the use of dative constructions and stressing the use of POCs according to specific morphosyntactic and semantic restrictions. Although this can be seen as an easy task, since these learners had the entire grammatical inventory that they needed to acquire the dative alternation in their L3, as White (1991) points out, when there is partial overlap in grammatical properties of the native and the non-native languages, the learner tends to assume that there is total overlap and that certain structures that are only present in the L1 would be also allowed in the L2. In the case of this language combination, all three languages allow POCs, and alternation between POCs and DOCs. Furthermore, Spanish has dative clitics like BP. The partial overlap between the previously known languages and BP may have helped the L3 BP learners to acquire the

dative alternation in BP, but may also have led learners to incorporate grammatical aspects of the L1 and the L2 grammars into the L3 Interlanguage system. In short, more cross-linguistic influence should be attested because of the partial overlap in the grammar of these three languages.

### 6.2.2. L3 acquisition of the dative alternation in BP

The L1 English/L2 Spanish and the L1 Spanish/L2 English speakers looked similar to the BP native speakers in some aspects, which indicates that they are in the process of mastering the properties of the dative alternation in BP.

- Both groups of L3 learners of BP accepted PPs and dative clitics with goal indirect objects and looked similar to BP native speakers in their production of goal indirect objects.

- Both L3 BP groups looked similar to the BP native speakers in their acceptability of source and benefactive datives.

- Both L3 groups produced more PPs than dative constructions with source, benefactive, and possessor arguments.

In other aspects the two groups of L3 BP learners differed from the BP native speakers but were very similar to each other.

- Both groups of L3 BP learners transferred from English and Spanish in the judgment tasks, although to different degrees and depending on some factors. Whereas transfer from English was found among the L3 learners who were either native English speakers or had a high level of proficiency in English, almost all learners transferred

from Spanish. Moreover, there was great individual variation in amount of transfer and kind of influence from Spanish. Individual differences were not related to native language, proficiency in Spanish or perception of language distance between Spanish and Portuguese.

- Both groups of learners looked more native-like in acceptability than in oral production of dative clitics.

- Both groups of learners looked very similar in their acceptability of 1st person dative clitics with different semantic roles.

- Although there were participants in both groups who accepted English-type DOCs in the GJT, none of the L3 BP learners produced these constructions.

- Both L3 BP groups over-produced dative constructions with indirect objects that had the roles of source, benefactive and possessor. The L1 English and the L1 Spanish speakers were very similar in their production of 1st person dative clitics.

- Both L3 BP groups perceived Spanish and Portuguese as closer languages than Portuguese and English in almost all linguistic levels but in phonology. English and Spanish were considered to have similar distance to Portuguese with respect to their sound inventories.

Although the two L3 BP groups looked similar in many aspects, there were also differences in the results of the two groups of learners.

- The L1 English speakers transferred more from English than the L1 Spanish speakers.

- The L1 Spanish speakers who transferred from English had high proficiency level in English and were all living in the U.S. at the time of testing. On the other hand, higher proficiency in Spanish was not related to transfer from Spanish among the L1 English speakers.

- The L1 English speakers followed a very similar pattern in their production of datives in Spanish and Portuguese, whereas the L1 Spanish speakers followed a different pattern of dative production in their native language and in the L3.

- The L1 Spanish speakers produced more dative constructions with 3rd person indirect objects with the roles of source and possessor than the L1 English speakers, which indicates that they transferred more form Spanish than the L1 English speakers with these two kinds of indirect objects.

- The L1 English speakers transferred more from Spanish with goal indirect objects than with source, benefactive, and possessor indirect objects.

- The L1 English speakers produced PPs doubled by dative clitics in Spanish and in Portuguese and produced more clitic doubling constructions in BP than the L1 Spanish speakers.

- A greater number of L1 English speakers than of L1 Spanish speakers mentioned English as a language that helps them in their production in Portuguese and claimed that this is due to similarities between English and Portuguese.

To sum up, the L3 BP learners were sensitive to morphosyntactic and semantic restrictions related to the dative alternation in BP. Overall, both groups of learners followed a similar pattern to the BP native speakers in their acceptability and production

of datives vs. PPs, with differences being rather quantitative. That is, acceptability and production rates of completely ungrammatical structures were not high in the majority of the categories, and most of the divergence was found in over acceptability and overuse of dative constructions with non-core arguments of the verb; that is with indirect objects that had the roles of source, benefactive and possessor. This indicates that the L3 BP learners were very good at acquiring the properties of the BP dative alternation, regardless of the difficulties discussed in Section 6.2.1. As mentioned, BP is under a process of language change and there is a partial overlap between properties of the dative alternation in BP, Spanish and English, which can delay the process of acquisition and increase the chance of transfer from English and Spanish. I will claim, however, that the L3 learners overcame these barriers and were overall successful in their task of learning the dative alternation in BP. Because the purpose of the study was to focus on cross-linguistic influence, most of the discussion in the following sections will be about the learners' errors, where the errors come from and whether they are systematic and predictable.

Before moving to the discussion of cross-linguistic influence, there is another aspect of the relationship between language acquisition and language change that can be explored. As mentioned above, the L1 English speakers transferred more from Spanish with goal indirect objects. In the GJT, the L1 English speakers preferred dative clitics to PPs to express goal indirect objects. In the picture description task, the L1 English speakers were target-like in the 1$^{st}$ person context, correctly producing 1$^{st}$ person dative clitics most of the time, but overproduced dative constructions in the 3$^{rd}$ person context, incorrectly producing the highest percentages of clitic doubling. In the

picture description task in Spanish, the L1 English speakers were also more similar to the native Spanish speakers in their production of datives in the goal category than in the other three categories. Although longitudinal data was not collected, one may be tempted to speculate, based on these results, that the L1 English speakers seem to have acquired dative constructions with goal arguments before, or more robustly, than with source, benefactive and possessor arguments. In Chapter 3, I proposed that BP is going through a process of losing dative constructions in which dative clitics are still productively used only with goal arguments. If the results of L2/L3 acquisition are compared to those of acceptability and production of datives by the BP native speakers, the acquisition of datives by L1 English speakers seems to inversely replicate the diachronic process of language change that was proposed for the BP grammar. Montrul (1997) also finds inverse development between the loss of dative case in English and the acquisition of datives by L1 English acquiring Spanish as an L2. She argues that diachronic syntax can help explain and predict stages of L2 development. I would like to add that the results obtained from the L1 English speakers not only confirm her hypothesis but also seem to corroborate my proposal that goal datives cannot have the same syntactic representation as other kinds of datives. This suggests that datives with core arguments of the verb are syntactically different of datives with non-core arguments, are more robust and are possibly the first to be acquired and the last to be affected in processes of language change.

Finally, differences in the results of the judgment tasks and the picture description task need to be addressed. As mentioned in Chapter 1, the use of two written and more metalinguistic tasks combined with an oral and less metalinguistic task

was motivated by specific features of the dative alternation in BP and by the benefits of combining different methodologies to obtain a more comprehensive evaluation and analysis of language acquisition and transfer. Although multiple aspects of L3 learners' knowledge could only be analyzed because different tasks were used, there were discrepancies and convergence in the results of the different kinds of tasks that need to be discussed. Results of the AJT and the picture description task were much more similar among the L3 BP learners than among the BP native speakers. The BP native speakers accepted source and benefactive datives but produced them at a low rate. The L3 BP learners, on the other hand, accepted and produced 1st person dative clitics with source, benefactive and possessor arguments. This suggests that the BP learners were not aware of differences in the use of datives in formal and colloquial register in BP and also over extended dative clitics to possessor arguments, which are no longer expressed by dative constructions in BP. It is possible that BP learners did not get enough input in spoken BP to notice differences in register.

On the other hand, although the L3 BP learners rated English-type DOCs and clitic doubling higher than the BP native speakers in the GJT, they never produced English-type DOCs in the picture description task. Mean production of clitic doubling reached the rate of 9% only within the L1 English group when producing 3rd person indirect objects with the role of goal. In all other categories the mean percentage of clitic doubling produced was very low and never exceeded 4%. Only two of all learners who produced clitic doubling in the picture description task did not accept this construction in the GJT. A different picture was found in the case of 1st person dative clitics with the role of possessor. There were more L3 BP learners who produced them than learners

who accepted them, and a total of 11 learners produced 1st person possessor datives and did not accept them in the AJT.

These discrepancies were possibly motivated by the nature of each task: one being an offline written comprehension task and the other one being an online oral production task. In the GJT, learners had all the time they needed to rate the level of acceptability of some sentences that, despite being ungrammatical, could still be interpreted. If a sentence has an interpretable meaning, non-native speakers are more likely to rate it as acceptable, but in production learners tend to be more conservative and use only the structures that sound more natural and are more often heard in the input, or, perhaps, the structures that they feel more competent with, or with which they have achieved more automatic processing. As for the complete absence of English-type DOCs in the oral production of the L3 BP learners, another aspect has to be taken into consideration. The vocabulary they had to use to describe the scenes in the picture description task was always presented in the same order: S V DO IO. Because the indirect object always appeared after the direct object, the L3 learners may have avoided using English-type DOCs because they required changing the order in which the words were presented. Although all participants still produced preverbal clitics, which indicates that they were not always following the order in which the words appeared in the screen, it is still necessary to consider that the order of presentation of the vocabulary may have worked as an indirect form of priming and may have led them to avoid V IO DO constructions when the full DPs were spelled out. Another change that could be made in the picture description task, in addition to the presentation of the vocabulary, is to slightly adapt the format of the task in order to elicit 3rd person

pronouns as well.[54] This would allow to look at whether BP native speakers and BP learners use 3rd person dative clitics in BP and would facilitate the use of English-type DOCs, if transfer from English affects learners' production. This is because in the English dative alternation, the pronominal form is more likely to appear close to the verb (Bresnan et al. 2005).

With respect to having transferred 1st person clitics with the role of possessor more in oral production than in acceptability, this is possibly a task effect as well combined with properties of the structure itself. On the one hand, in the AJT the learners were more focused on the construction of the sentence and had more time to use their metalinguistic knowledge. On the other hand, 1st person dative clitics are not completely ungrammatical in BP but their use is subject to syntactic and semantic restrictions. In a production task, in which the learner has less control of the construction of the sentence, it is more likely that she will overextend the use of a grammatical structure to syntactic and semantic contexts in which the structure is not possible. Furthermore, all participants completed the AJT a few days before the picture description task. If, as suggested by Bock and Griffin (2000), priming has long-lasting effects and is part of implicit learning, the L3 BP learners may have been more prone to use structures that they saw in the AJT and in the GJT when producing sentences in the picture description task. Because they judged and produced the same structures in four different tasks, I acknowledge that structural priming may have played an important role

[54] The picture description task did not elicit 3rd person clitics that were not doubling an a-DP because the referents were not mentioned previously to the learner's description of the scene.

in the results of the present study. One way to reduce the effect of priming would be to have participants complete the picture description task before the judgment tasks.

Considering specificities and limitations of both kinds of tasks, it seems that a less metalinguistic task is more accurate to examine language transfer when disparities are found, because in a controlled production task the researcher can manipulate the context and the vocabulary but the learners have some freedom to choose among a few possibilities. In contrast, in judgment tasks learners are forced to judge sentences that they would probably hardly ever produce, and it is likely that their judgments are based more on the possibility of interpreting the sentence by imposing to it the grammar of one of the other languages they already know.

I now turn to the discussion of the factors that may have affected cross-linguistic influence from English and Spanish when the L3 BP learners judged and produced sentences in Portuguese.

## 6.3. Cross-linguistic influence in L3 acquisition of BP by L1 English/L2 Spanish and L1 Spanish/L2 English

As mentioned in Chapter 4, transfer from previously known languages has been debated and investigated in the field of L3 acquisition, but researchers have not yet agreed on what the main sources of transfer are or which factors play a relevant role in this process. Results vary greatly depending on the language combination, the linguistic aspect investigated, and the methodology used. There is not yet a clear understanding of how previously acquired languages influence the acquisition of any additional language beyond the L2. Some of the factors that have been argued to play a relevant

role in cross-linguistic influence are: order of acquisition, (perceived) language distance and proficiency. Each of them will be discussed separately below on the basis of the results obtained in this study.

### 6.3.1. The role of proficiency in cross-linguistic influence

As mentioned in Chapter 4, it has been found that the higher the level of proficiency in the L2, the higher the degree of influence of the L2 in the acquisition of the L3 (Salaberry 2005, Bayona 2009, Jaensch 2009). In the present study, the higher the level of proficiency in English of the L1 Spanish speakers, the more they transferred from English. In addition, all L1 Spanish speakers who transferred from English were living in the U.S. when they participated in the present study. On the contrary, transfer from Spanish into BP was not related to level of proficiency in Spanish among the L1 English speakers. These results indicate that proficiency in the L2 seems to play an important role in language transfer only when the L2 and the L3 are not closely related languages and when level of proficiency is combined with recency of use.

Another aspect that needs to be considered is that, although there was not a statistical difference between the two L3 groups in their level of proficiency in the L2, there was more variation in the L2 proficiency level among the L1 Spanish speakers than among the L1 English speakers. Only three participants in the L1 English group scored below 75% in the Spanish proficiency test, and two of them did not transfer from Spanish. Thus, because the L1 English group was quite homogeneous in terms of level of proficiency in Spanish, correlations between proficiency and transfer from the L2 were possibly more difficult to be identified. A relationship between proficiency and

transfer would probably be more easily found in a sample that had learners with wider range of proficiency level in the L2. In addition to homogeneity in Spanish proficiency level, the L1 English speakers' knowledge of dative constructions was specifically tested in the picture description task in Spanish. All participants produced dative constructions in the 1st and the 3rd person contexts, which indicates that they had acquired dative constructions and could potentially transfer them to Portuguese. On the other hand, the L1 Spanish speakers did not complete a picture description task in English, so it was not possible to look at whether all participants who knew DOCs in English transferred them to Portuguese. Ideally, to completely avoid biasing the results towards analyzing transfer from Spanish, a picture description task in English should have been included in the study. This was not done because this study had too many tasks, which meant that each participant took approximately two hours to complete all the tasks. The participants had already to meet with the researcher two times and another oral production task would imply scheduling a third meeting. In addition, it was difficult to design a picture description task that used the same pictures and verbs in the three languages because there is more variation between English and the two Romance languages with respect to semantic properties and argument structure of the verbs.

As for proficiency in the L3, it was expected that the higher the level of proficiency in the L3 the lower the degree of influence of any of the previously known languages. Transfer from English in the GJT and transfer from Spanish in the picture description task were related to the proficiency level in Portuguese for the L1 Spanish group, which means that the higher the level of proficiency in Portuguese the less the L1 Spanish speakers transferred from English in the GJT and from Spanish in the

picture description task. Proficiency in Portuguese did not seem to matter at all for the L1 English group. In the individual analyses, there was no difference in the proficiency level in Portuguese between the L3 BP learners who did transfer from English and the learners who did not, nor between the L3 learners who had high levels of transfer from Spanish and those who had low levels of transfer from Spanish. As mentioned in Section 6.2.1, the acquisition of the dative alternation in BP imposes difficulties to the non-native learner, which may delay the mastering of certain properties that are at the interface of syntax and semantics (Sorace 2000, Sorace & Filiaci 2006). Therefore, it is not surprising that transfer does not decrease in the same rate as proficiency in the target language increases. The fact that level of proficiency in Portuguese was a stronger predictor of transfer from English and Spanish into Portuguese within the L1 Spanish group than within the L1 English group is an unexpected result and cannot be easily explained. I hypothesize that this difference may be related to a dynamic interaction among different factors that influence language transfer. A more detailed discussion about the dynamic interaction of different factors that can account for cross-linguistic influence, including the role of language proximity, will be presented in Section 6.3.3.

### 6.3.2. The role of order of acquisition in cross-linguistic influence

As described in Chapter 4, there are works showing that the acquisition of morphosyntax in the L3 is mostly affected by the L1 (Lozano 2002, Jin 2009, Na Ranong & Leung 2009), whereas others found that the main source of transfer is the L2 or the most recently acquired language (Bardel & Falk 2007, Rothman & Cabrelli Amaro

2010, Falk & Bardel 2011), as proposed by the L2 Status Factor Hypothesis (Bardel & Falk 2007, Falk & Bardel 2010). Positions based on transfer coming exclusively from the L1 or from the L2 follow both from theories claiming a fundamental difference between L1 and L2 acquisition and representation. As pointed out by García Mayo and Rothman (2012), the absolute L1 transfer position is aligned with theories according to which adult non-native language learners do not have access to UG and, thus, do not acquire properties that are not instantiated in their L1 grammar. Logically, if the specific properties of the L2 cannot be acquired, it means that the L1 is the unique source of transfer for any subsequent language learning process that takes place after puberty. On the other hand, proponents of the L2 Status Factor argue that the declarative/procedural memory model (Paradis 1994) makes specific predictions for non-native language learning that support the idea that transfer comes mainly from the L2 (Bardel & Falk 2012). According to Paradis' perspective, the L1 grammar is implicitly acquired and its competence involves procedural representations. The L2 grammar of adult language learners, on the other hand, is learned explicitly and stored in declarative memory. From fundamental neurolinguistic differences between the native language knowledge and all non-native languages knowledge follow that the interaction between the non-native systems is more likely to happen.

The data obtained in the present study does not support any of these two hypotheses. First, the L1 English speakers when completing the picture description task in Spanish, their L2, produced dative constructions with all kinds of indirect objects, which attests that most of these L2 Spanish speakers acquired morphosyntactic as well as semantic aspects of dative constructions. Although they produced less dative

constructions when compared to the L1 Spanish speakers and still made errors, they acquired subtle properties of the dative alternation in Spanish that are not instantiated in their L1. These results are consistent with the findings of previous studies on the acquisition of datives in L2 Spanish by L1 English speakers (Bruhn de Garavito 2000, Perpiñán & Montrul 2006). Bruhn de Gravito found that L1 English speakers who are near-native speakers of Spanish were able to acquire properties of dative constructions not evident in the input, which indicates that the acquisition of non-native languages, as the acquisition of the native language, is constrained by UG.

Second, the L1 Spanish/L2 English and the L1 English/L2 Spanish speakers transferred from both previously known languages to Portuguese, and Spanish was the main source of transfer for both groups, regardless of order of acquisition. Although transfer from English was explicitly tested in only one of the categories of the GJT, both groups of learners used POCs with source indirect objects in the picture description task, which suggests that positive transfer from English may have helped both groups of learners. Whereas English and BP use POCs to express source arguments, the PP variant is not available for source arguments with most of the verbs in Spanish (Cuervo 2003), which is confirmed by empirical data collected in this study. The only exception among the four verbs used in the Spanish version of the picture description task was *sacar* 'take', which was used with dative constructions as well as with PPs. If the POC is not available with most of the verbs that select a source argument in Spanish, it can be argued that only English may have helped the L3 BP learners when they produced POCs in this semantic category. As mentioned in Chapter 5, the L1 English speakers were more target-like than the L1 Spanish speakers in the production of PPs with 3rd

person source arguments, but both groups of learners produced PPs with the target preposition. It suggests that, although English seems to have helped more the L1 English speakers than the L1 Spanish speakers both groups of L3 BP learners might have benefited from positive transfer from English.

Considering that transfer from both previously know languages was attested in both L3 BP groups, I will argue that the patterns of cross-linguistic influence found in this study partially support the Cumulative-Enhancement Model (Flynn et al. 2004), according to which all properties present in either of the previously learned systems are available to the L3 learner. However, the Cumulative-Enhancement Model also predicts that "language acquisition is accumulative, i.e. the prior language can be neutral or enhance subsequent language acquisition" (Flynn et al. 2004, p.14). As shown here as well as in previous studies (e.g. Bohnacker 2006 and Chin 2009 among others), any known language can have a positive or a negative effect on the development of the L3 system. In the present study, both groups of L3 learners accepted and/or produced structures that are ungrammatical in BP and are possible in either English or Spanish. Furthermore, proposing that any kind of negative transfer is blocked in L3 acquisition does not only contradict findings in other L3 studies but it also contradicts what has been found in studies in other fields of language acquisition. Negative effects of the L1 on the L2 interlanguage grammar have been extensively attested (e.g. Bruhn de Garavito 2000, Perpiñán & Montrul 2006, Sorace & Filiaci 2006, Oh 2010, Liu 2011 among many others). Negative influence of one linguistic system onto another has been also found in cases of L1 attrition (e.g. Tsimpli et al. 2004 among others) and among heritage speakers of a minority language (e.g. Montrul 2006, 2010a, Montrul & Ionin

2010 among others). If language transfer can have a positive as well as a negative effect in many different cases of bilingualism, why would previously acquired languages have only a positive effect in the acquisition of other non-native languages beyond the L2? The proponents of the Cumulative-Enhancement Model do not offer a reasonable account for the absence of negative effects of language transfer in L3 acquisition. Therefore, contrary to the Cumulative-Enhancement Model, I argue that cross-linguistic influence in L3 acquisition do not differ from cross-linguistic influence in other language contact situations and can have a positive effect, facilitating the process of language acquisition and maintenance, as well as a negative effect, leading to vulnerability or optionality in certain grammatical areas.

Although absolute transfer from either the L1 or the L2 was not found in this study, I hypothesize that the order in which the languages were acquired seems to matter for how previously acquired languages influence the acquisition of the L3. First, when the two groups are compared, more L1 English speakers than L1 Spanish speakers transferred from English and a greater number of L1 Spanish speakers than L1 English speakers transferred from Spanish. Second, the patterns of transfer from Spanish were not identical for each group. It indicates that the order in which the languages were acquired may determine in what way they will affect the acquisition of the L3. This will be further discussed in the next Section.

### 6.3.3. The role of (perceived) language distance in cross-linguistic influence

The findings of this study are also partially compatible with the Typological Primacy Model (Rothman 2011), which predicts that transfer is selective and will always

come from the typologically closer language. In addition, transfer can have either positive or negative effects. Because most of the transfer came from Spanish, a language that is more closely related to Portuguese when compared to English, it is impossible to deny that language proximity plays an important role in language transfer. Nevertheless, my findings do not support the idea that transfer is selective. In addition to transferring from the closer language, both groups of learners also transferred from English, a Germanic language that is overall less similar to Portuguese than Spanish. The Typologycal Primacy Model posits that when (psycho)typology is relevant, it will be the main factor motivating transfer in L3 acquisition. However, its predictions have been formulated mainly on the basis of L3 acquisition studies in which the language combination included Spanish and Portuguese. These two languages have a degree of similarity that is hardly found in other language pairings. Moreover, it is worth highlighting that two languages are rarely completely different or completely similar. There is a continuum of language distance that seems to be incompatible with selective transfer. Where do we set the limit where proximity starts to be the most relevant factor determining language transfer? In order to claim that language proximity is the main factor that determines the source of language transfer, it is necessary to examine whether transfer comes exclusively from the closer language even when the language pairing includes languages that are not so closely related. Even in the case of Spanish and Portuguese, other studies have found that Spanish is not the only source of cross-linguistic influence when learners know Spanish and English and are learning Portuguese, regardless of the linguistic proximity between Spanish and Portuguese (Montrul et al. 2009a, Montrul et al. 2009b, Ionin et al. in press). In these studies, L1

Spanish speakers transferred only from Spanish, whereas L1 English speakers displayed a mixed pattern, transferring from both the L1 and the L2.

Furthermore, in light of the findings presented here, I hope to pursue a more in depth discussion of typological proximity vs. genetic relatedness and the role of psychotypology. It is not clear in the description of the Typological Primacy Model how typology and psychotypology are defined and the use of appropriate and clearly defined terminology is key for the development of the L3 acquisition field. As discussed in Chapter 4, typological proximity (languages that share specific structural properties) needs to be clearly distinguished from genetic relatedness (languages that belong to the same family) in order to make specific prediction about transfer. Moreover, psychotypology, as defined by Kellerman (1983), and later discussed by other authors (e.g. Ringbom 2007, Ringbom & Jarvis 2009, Hammarberg 2009b), is conceptualized as a conscious process that depends on observation, evaluation and comparison, whereas in the later version of the Typological Primacy Model, it seems to be assumed that psychotypology is an unconscious process through which the internal parser assesses language proximity. Furthermore, Rothman (2010) finds that L3 learners of BP transfer from Spanish even when Spanish and Portuguese are not typologically similar. Rothman (2010) examines the L3 acquisition of word order in interrogative sentences and preferences of relative clause attachment in BP by L3 BP learners who already know English and Spanish. Despite his claims that L1 English/L2 Spanish and L1 Spanish/L2 English transfer from Spanish and that his findings support the Typological Primacy Model, Spanish is typologically different of BP with respect to the syntactic aspects examined. The concept of typological proximity seems to have been

used as a synonym of general proximity or genetic relatedness. Because genetic relatedness or general similarity does not always entail typological proximity when it comes to specific language structures, these concepts must be disentangled and precisely defined in order to determine which factors are more relevant for cross-linguistic influence in L3 acquisition.

To contribute to the debate of whether cross-linguistic influence is affected by conscious perception of language distance or psychotypology –as historically defined–, L3 BP learners completed a language distance questionnaire that intended to assess their perception of linguistic distance between Spanish and Portuguese and between English and Portuguese. Results revealed that the two L3 learners groups were very similar in their perception that Spanish is closer to Portuguese than English. Because participants in both L3 groups transferred more from Spanish than from English, language transfer came mainly from the language perceived as closer to Portuguese. This is consistent with the hypothesis that perceived linguistic proximity plays a relevant role in determining the source of transfer in L3 acquisition, regardless of order of acquisition. However, perceived distance between English and Portuguese was not a good predictor of whether transfer from English took place, neither perceived distance between Spanish and Portuguese was related to amount of transfer from Spanish. Although there was almost no difference between the L3 groups and a small variation among all participants in perception of language distance, the L3 BP learners varied greatly in amount of transfer from Spanish, what structures they transferred, and in which test categories transfer from Spanish was observed. These results challenge the proposal that it is perception of similarity that is facilitating transfer from Spanish. It is

plausible to assume that in cases of languages that are not only genetically related but also share vocabulary and many structural properties –including dative clitics–, such as Spanish and Portuguese, they will inevitably be perceived as similar languages by all learners regardless of whether and how much they transfer from Spanish.

It is also necessary to consider that this is the first study that proposes an experimental instrument to measure perception of language distance. Even though scholars have been discussing how psychotypology affects cross-linguistic influence, there has not been a previous attempt to disentangle psychotypology from typology. As discussed in Chapter 4, Ringbom (2007) presents a series of arguments for why psychotypology cannot be assumed on the basis of typological relation between two languages. Therefore, researchers in the field of L3 acquisition need to make an effort to determine how learners perceive the distance between languages and whether this perception is related to patterns of language transfer. I acknowledge that the questionnaire used in this study measures perception of language distance using exclusively explicit and direct questions, whereas it may not be always possible to completely rationalize perception of language distance. Perhaps a more holistic measure of psychotypology would have to combine implicit and explicit instruments to assess learners' perception of language distance more accurately. Implicit measures of perception of language distance could include open-ended questions, interviews, or even judgments made after different stimuli in two pairs of languages were presented either written or auditorily.

It may as well be hypothesized that awareness or conscious perception of proximity between languages is not the factor that drives the process of cross-linguistic

influence. An alternative account posits that language proximity directly affects internal mechanisms without the learner's awareness, as in the Typologycal Primacy Model. In a superficial examination of the results obtained in this study, both groups of learners transferred mainly from Spanish and were similar in most of the tasks. However, more detailed analyses show subtle differences in how Spanish affected oral production in Portuguese of each of the learners groups. Comparison of the results of the two picture description tasks show that whereas the L1 Spanish speakers followed a different pattern in their production of datives in Spanish and Portuguese, the L1 English speakers followed the same pattern of dative production in both languages. Among the L1 English speakers, difference in the use of datives in the two languages is exclusively quantitative. Furthermore, the L1 English speakers produced more clitic doubling constructions than the L1 Spanish speakers and produced PPs doubled by dative clitics. This suggests that the L1 English speakers used a similar grammar in the two languages, differing only in the amount of datives used in each language; whereas the L1 Spanish speakers made a more clear distinction between the grammatical properties of the dative alternation in Spanish and BP.

In addition, almost all errors with prepositions made by the L1 Spanish speakers were replacement of *de* 'from/of' by para 'for' with source and possessor arguments. In BP "*a*" and *para* are both full prepositions and they can be used with goal and benefactive arguments because their meaning is compatible with the meaning of these two kinds of indirect objects. Although BP native speakers prefer to use *para,* the preposition "*a*" is quite frequent with goal arguments and still possible, although not frequently used, with benefactive arguments. Because the meaning of "*a*" and *para* is

not compatible with the relation between direct objects and indirect objects that have the roles of source and possessor, constructions with any of these prepositions are ungrammatical with these two kinds of arguments in BP. Thus, use of "*a*" to introduce a source or possessor argument was interpreted as instances of transfer from Spanish. The L1 Spanish speakers, in addition to producing the dative case marker "*a*" with source and possessor arguments, incorrectly used *para* with these two kinds of arguments as well. In Spanish the preposition used to express source and possessor relations is *de* –identical to the preposition in Portuguese–, and L1 Spanish speakers never produce *para* with source or possessor arguments in their native language. This suggests that the L1 Spanish speakers may have misanalysed *para* as a variant of the dative case marker "*a*"*,* because the two forms alternated in sentences with goal and benefactive arguments. Errors with prepositions were very different among the L1 English speakers and incorrect use of *para* was produced only twice within this group. This suggests that misanalysis of *para* as a variant of the dative case marker "*a*" happened only among the L1 Spanish speakers.

In short, whereas the two L3 groups were very similar in their perception of distance between Spanish and Portuguese, they differed in the patterns of transfer. These differences seem to suggest that transfer from Spanish was not due to wrong hypotheses about the BP grammar based on perception of similarities between Spanish and Portuguese; but rather due to a process in which the influence from Spanish happened without the learners' control or awareness. In this aspect, my data supports the Typologycal Primacy Model in its prediction that language proximity is unconsciously assessed by the mind of the learner.

In light of these findings, I would like to hypothesize that any property of the steady-state system of any known language can potentially be transferred to the language that is being currently learned or used and the effects of cross-linguistic influence can be either positive or negative.[55] Transfer from the linguistic system A will be favored over transfer from the linguistic system B when A is genetically related to the target language Z and they share vocabulary, grammatical and phonological features. Whether cross-linguistic influence will come mainly or exclusively from A or there will be transfer from B as well will depend at least on the degree of proximity between A and Z and B and Z, the order in which A and B were acquired and the proficiency level in B; considering that B is not closely related to Z. Cross-linguistic influence depends on whether previously known languages are activated in the mind of the learner and on a dynamic interaction among their systems. As suggested by studies on cross-linguistic syntactic priming (Loebell & Bock 2003, Hartsuiker et al. 2004), the syntactic representation of different languages may be integrated in the mind of the speaker and the use of one language activates another, which may lead to the influence of the structure of one linguistic system in the structure of another during production and comprehension.

To summarize, the results of the present study suggest that cross-linguistic influence is more likely to happen without the learner's control or awareness and its effects depend on the degree of similarity between the languages, the order in which

[55] As mentioned in Section 5.3.1, many L3 learners who participated in this study know other languages besides English, Spanish and Portuguese. Because I propose that transfer can come from any previuously known language, I acknowledge that these other languages may have influenced the L3 learners' judgements and oral production in Portuguese as well.

the languages were acquired, the level of proficiency in the most distant language, and, possibly, on the linguistic domain that is considered and whether the languages share properties in that particular linguistic domain. Transfer comes preferably from languages that are very closely related to the target language. The native language of the learner or a language in which the learner is very proficient are also the preferred sources of transfer but what transfers depends on the steady-state system of each previously acquired language. In addition, transfer is facilitated when the target language share structural properties with any of the previously learned languages. Similarly, studies on cross-linguistic syntactic priming show that priming effects are weak or absent when there is structural difference between the two languages (Loebell & Bock 2003). Moreover, transfer may come from more than one language and the source of transfer may change for different linguistic domains.

To look at whether the steady-state grammar of any previously known language can potentially transfer in processes of subsequent language learning, participants need to be tested not only in their L3 but also in their L2(s). Furthermore, it is necessary to vary the language combination in order to see how language proximity interacts with other factors, such as order of acquisition, linguistic domain and proficiency level. Finally, because cross-linguistic influence is a complex process in L3 acquisition, it is crucial to use a methodology that combines different types of tasks and a detailed description of the results that includes not only group analyses but also individual analyses. As stated in Chapter 5, there was a great variation among the L3 BP learners on amount of transfer and on what transferred from Spanish, and subtle differences

between the two L3 groups could only be captured because the results of the different tasks and groups were thoroughly compared.

## 6.4. Conclusions

To sum up, the results of the present study show that the L3 BP learners acquired properties of the dative alternation in BP but still made errors and accepted ungrammatical structures. Influence from either English or Spanish can account for the acceptability of ungrammatical structures and most of the errors found in oral production. Both groups of L3 BP learners transferred from English and Spanish, which partially supports the Cumulative-Enhancement Model. However, cross-linguistic influence had both positive and negative effects; against predictions of this model. The L1 English speakers transferred more from English than the L1 Spanish speakers and both groups of learners transferred more from Spanish than from English. The fact that transfer came mainly from Spanish, which is genetically closer and more similar to Portuguese than English, supports the Typologycal Primacy Model. Additionally, a comparison between the results of the language distance questionnaire and patterns of transfer from Spanish in oral production indicates that perception of language proximity, or psychotypology, does not seem to be the main factor triggering cross-linguistic influence. Language proximity due to genetic relatedness and typological proximity seem to affect internal mechanisms of language acquisition and use without the learner's awareness, as predicted by the Typologycal Primacy Model. However, the results obtained in this study do not entirely support this model because cross-linguistic influence was not selective. Transfer from English, the more distant language, was also attested for both groups of learners. Finally, because the L1 English transferred more from English than

the L1 Spanish speakers and the effect of transfer from Spanish was different for each group, depending on the steady-state Spanish grammar, it is claimed that order of acquisition also plays a role in language transfer. Therefore, I propose that cross-linguistic influence can potentially come from any of the previously learned languages and can have positive and negative effects, but the source of transfer will depend on a dynamic interaction between the previously known languages and the target language. Whether and which previously acquired language will be transferred from depends on the steady-state system of the previously acquired languages, the degree of similarity between the languages, the order in which the languages were acquired, the proficiency level in the most distant language, and, perhaps, on the linguistic domain.

Cross-linguistic influence has proven to be an important factor in any language contact situation. Its importance and complexity have been highlighted with the growing body of research on multilinguals and L3 acquisition. Multilinguals have three or more linguistic systems that can interact and affect each other, which by itself makes the process of cross-linguistic influence much more complex than in the case of bilinguals. Moreover, the experience of multilinguals with the languages they know also presents a great and rich degree of variation. This is why it seems more reasonable to propose that source and amount of transfer can vary depending on the linguistic systems that are interacting and on the linguistic domain. Whether patterns can be found within this dynamic process continues to be a question that still needs to be further investigated. To address it, studies shall ideally examine more than one linguistic phenomenon with the same language combination. Within the Romance languages, there is already a good number of studies that evaluate the acquisition of Portuguese by Spanish/English

bilinguals. Overall, these studies have shown that in the case of very closely related languages, language proximity is a key factor in determining source and amount of transfer. However, it remains to be further investigated and discussed whether language proximity still plays a role in language transfer in the case of language pairings in which there is less similarity. García Mayo (2012) cites many studies with simultaneous Spanish/Basque bilinguals learning L3 English. Several morphosyntactic domains were examined in these studies and the overall findings show that these L3 learners transfer from both Basque and Spanish. Although Spanish and English are Indo-European languages and Basque is completely unrelated to them, L3 English learners still transfer from Basque. This indicates that in the case of languages that share vocabulary, sounds and grammatical features but are only somewhat similar, the role of language proximity is less prominent and transfer will not come primarily from the closer language. In addition to considering different degrees of similarity, it is necessary to investigate the role of similarity at different linguistic levels, which may not always follow from genetic relatedness. For instance, similarity in the sound inventory may not play the same role as similarity in vocabulary. I acknowledge that it is not easy to tease apart the different linguistic levels when it comes to evaluate the role of language proximity. Nevertheless, there are some language pairings that may be helpful in addressing this issue. English and German, for example, share a great percentage of their vocabulary but their grammars are quite different. In short, to make strong claims about the role of language relatedness, language similarity or typological proximity, more research with different language combinations, groups of learners and a great variety of linguistic properties is needed.

As for whether different linguistic systems will be activated and will influence each other in the learner's mind without the learner's control, or whether cross-linguistic influence follows from the learner's perception of similarity between two linguistic systems is still an open question as well. To address this issue more research on multilingual language processing, cross-linguistic syntactic priming or other psycholinguistic aspects of the multilingual mind, and a fecund articulation between these bodies of research with research conducted within generative approaches is essential.

Another aspect that was discussed here and is key to further develop the field of L3 acquisition is the must of having an appropriate and precise terminology shared by scholars in the field. Thus, it is crucial that terms such as typological proximity and genetic relatedness are accurately distinguished and defined. Scholars also need to agree on what psychotypology means and whether it should keep its traditional definition and use (Kellerman 1983) or it should be redefined based on more recent findings and debates on cross-linguistic influence. This study has pointed out some of the terminological discrepancies and has proposed more precise definitions of some concepts. Ideally, future research on L3 acquisition should also make an effort to tease apart the role of language similarity due to genetic relatedness from the role of typological proximity. Studies on the acquisition of L3s that share structural properties but do not belong to the same family as previously acquired language can contribute a great deal to this debate.

To conclude, it is uncontroversial that the development of L3 acquisition as an independent field of research within the language acquisition studies has already made

important contributions to the debate on the role of cross-linguistic influence. Therefore, with multilingualism becoming the norm and the increasing possibility of conducting research with a greater variety of languages, the field of L3 acquisition has the potential to make important theoretical contributions about language acquisition in general and about the architecture of the linguistic systems in the human mind.

# References


Anagnostopoulou, E. 2005. Clitic doubling. In M. Everaert & H. Riemsdijk (Eds), *The Blackwell Companion to Syntax* (pp. 519–581). Oxford: Blackwell Publishing.

Aoun, J. & Li, Y. A. 1989. Scope and Constituency. *Linguistic Inquiry*, 20(2), 141–172.

Araújo Ramos, M. C. 1992. *O clítico de 3ª pessoa : um estudo comparativo português brasileiro/espanhol peninsular*. PhD dissertation. Universidade Federal de Alagoas.

Baker, M. C. 1997. Thematic roles and syntactic structure. In L. Haegeman (Ed) *Elements of Grammar: Handbook in Generative Syntax* (pp. 73–137). Dordrecht, Netherlands: Kluwer.

Baker, M. C. 1988. *Incorporation: a theory of grammatical function changing*. Chicago: The University of Chicago Press.

Bardel, C. & Falk, Y. 2007. The role of the second language in third language acquisition: the case of Germanic syntax. *Second Language Research*, 23(4), 459–484.

Bardel, C. & Falk, Y. 2012. The L2 Status Factor and the declarative/procedural distinction. In J. Cabrelli Amaro, S. Flynn, & J. Rothman (Eds) *Third language acquisition in adulthood* (pp. 61–78). Amsterdam/Philadelphia: John Benjamins.

Barss, A. & Lasnik, H. 1986. A note on anaphora and double objects. *Linguistic Inquiry*, 17(2), 347–354.

Bascuñán, S. B. 2007. *Estudio diacrónico y sincrónico del objeto indirecto en el español peninsular y de América*, Copenhague: Museum Tusculanum Press.

Bayona, P. 2009. The acquisition of Spanish middle and impersonal passive constructions from SLA and TLA perspectives. In Y. I Leung (Ed) *Third Language Acquisition and Universal Grammar* (pp. 1–29). Clevedon: Multilingual Matters,.

Beck, S. & Johnson, K. 2004. Double Objects Again. *Linguistic Inquiry*, 35(1), 97–123.

Belloro, V. A. 2007. *Spanish clitic doubling: a study of the syntax-pragmatics interface.* PhD dissertation. State University of New York at Buffalo.

Benveniste, E. 1971. The nature of pronouns. In Problems in general linguistics. Coral Gables: University of Miami Press, pp. 217–222.

Berlink, R. 1997. Sobre a realização do objeto indireto no português do Brasil. In *Anais do II Encontro do Círculo de Estudos Lingüísticos do Sul*. Florianópolis: Universidade Federal de Santa Catarina.

Berlink, R. 1988. *A Ordem V SN no português do Brasil: sincronia e diacronia*. Master thesis. Campinas: UNICAMP.

Bley-Vroman, R. 1990. The logical problem of foreign language learning. *Linguistic Analysis*, 20(1-2), 3–49.

Bock & Griffin, Z.M. 2000. The persistence of structural priming: Transient activation or implicit learning? *Journal of Experimental Psychology: General*, 129(2), 177–192.

Bohnacker, U. 2006. When Swedes begin to learn German: from V2 to V2. *Second Language Research*, 22(4), 443–486.

Bouvy, C. 2000. Towards the construction of a theory of cross-linguistic transfer. In J. Cenoz & U. Jessner (Eds) *English in Europe: the acquisition of a third language* (pp. 143–156). Clevedon: Multilingual Matters.

Bresnan, J. 2007. Is knowledge of syntax probabilistic? Experiments with the English dative alternation. In S. Featherston & W. Sternefeld (Eds) *Roots : Linguistics in Search of its Evidential Base* (pp. 75–96). Berlin: Mouton de Gruyter.

Bresnan, J., Cueni, A., Nikitina, T. & Baayen, R. H. 2005. Predicting the dative alternation. In G. Bouma, I. Krämer, & J. Zwarts (Eds) *Cognitive Foundations of Interpretation* (pp. 69–94). Amsterdam: Royal Netherlands Academy of Science.

Brito, O. 2001. *Faça o Mundo Te Ouvir: a Uniformidade de tratamento na História do Português Brasileiro*. Master thesis. Universidade Estadual de Londrina.

Bruhn de Garavito, J. 2000. *The syntax of Spanish multifunctional clitics and near-native competence*. PhD dissertation. McGill University.

Carvalho, A. M. & Silva, A. J. B. 2006. Cross-linguistic influence in third language Acquisition: the case of Spanish-English bilinguals' acquisition of Portuguese. *Foreign Language Annals*, 39(2), 185–202.

Cenoz, J. 2003. The role of typology in the organization of the multilingual lexicon. In J. Cenoz, B. Hufesein, & U. Jessner (Eds). *The Multilingual Lexicon* (pp. 103–116). Dordrecht: Kluwer.

Cenoz, J. 2001. The effect of linguistic distance, L2 status and age on crosslinguistic influence in third language acquisition. In J. Cenoz, B. Hufeisen, & U. Jessner, (Eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 8–20). Clevedon: Multilingual Matters.

Cenoz, J., Hufeisen, B. & Jessner, U. 2001. Introduction. In J. Cenoz, B. Hufeisen, & U. Jessner, (Eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 1–7). Clevedon: Multilingual Matters.

Chin, D. H. 2009. Language transfer in the acquisition of the semantic contrast in L3 Spanish. In Y. I. Leung, (Ed) *Third language acquisition and universal grammar* (pp. 30–54). Clevedon: Multilingual Matters.

Chomsky, N. 1959. A review of B. F. Skinner's Verbal Behavior. *Language*, 35(1), 26–58.

Colantoni, L. 2002. Clitic doubling, null objects and clitic climbing in the Spanish of Corrientes. In J. Gutiérrez Rexach (Ed) *From Words to Discourse: Trends in Spanish Semantics and Pragmatics* (pp. 321–336). Amsterdam: ELSEVIER.

Colomé, À. 2001. Lexical Activation in Bilinguals' Speech Production: Language-Specific or Language-Independent? *Journal of Memory and Language*, 45(4), 721–736.

Cook, V. 2003. *Effects of the Second Language on the First*. Clevedon: Multilingual Matters.

Cuervo, M. C. 2010. Against ditransitivity. *Probus: International Journal of Latin & Romance Linguistics*, 22(2), 151–180.

Cuervo, M. C. 2007. Double objects in Spanish as a second language. *Studies in Second Language Acquisition*, 29, 583–615.

Cuervo, M. C. 2003. *Datives at large*. PhD dissertation. Massachusetts Institute of Technology.

Cyrino, S.L. 1997. *O objeto nulo no Português do Brasil. Um estudo sintático-diacrônico*. Londrina: Editora da UEL.

Cyrino, S. L. 1993. Observações sobre a mudança diacrônica no português do Brasil: objeto nulo e clíticos. In I. Roberts & M. Kato (Eds) *Português brasileiro: uma viagem diacrônica* (pp. 163–184). Campinas: Editora da UNICAMP.

Davies, W. 1994. English dative alternation and evidence for a thematic strategy in adult SLA. *Issues in Applied Linguistics*, 5(1), 59–82.

De Angelis, G. 2007. *Third or Additional Language Acquisition*. Clevedon: Multilingual Matters.

De Angelis, G. 2005. Multilingualism and non-native lexical transfer: an identification problem. *International Journal of Multilingualism*, 2(1), 1–25.

De Angelis, G. & Selinker, L. 2001. Interlanguage transfer and competing linguistic system in the multilingual mind. In J. Cenoz, B. Hufeisen, & U. Jessner, (Eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 42–58). Clevedon: Multilingual Matters.

Demonte, V. 1995. Dative alternation in Spanish. *Probus: International Journal of Latin & Romance Linguistics*, 7, 5–30.

Demonte, V. 1994. Datives in Spanish. *University of Venice Working Papers in Linguistics*, 4(1), 71–96.

Diaconescu, C. R. & Rivero, M. L. 2007. An applicative analysis of double object constructions in Romanian. *Probus: International Journal of Latin & Romance Linguistics*, 19(2), 209–233.

Döpke, S. 2000. Generation of and retraction from cross-linguistically motivated structures in bilingual first language acquisition. *Bilingualism: Language and Cognition*, 3, 209–226.

Duarte, M.E. 2000. The loss of the “Avoid Pronoun Principle” in Braziliam Portuguese. In M. Kato & E. Negrão, (Eds) *Brazilian Portuguese and the Null Subject Parameter* (pp. 17–35). Frankfurt: Verveuert-Iberoamericana.

Duarte, M. E. 1993. Do pronome nulo ao pronome pleno: a trajetória do sujeito no português do Brasil. In I. Roberts & M. Kato (Eds) *Português brasileiro uma viagem diacrônica: homenagem a Fernando Tarallo* (pp. 107–125). Campinas: Editora da UNICAMP.

Duarte, M. E. 1992. A perda da ordem V(erbo) S(ujeito) em interrogativas QU no português do Brasil. *D.E.L.T.A.*, 8, 37–52.

Eubank, L. 1993. On the transfer of parametric values in L2 development. *Language Acquisition*, 3(3), 183–208.

Oh, E. 2010. Recovery from first-language transfer: The second language acquistion of English double objects by Korean speakers. *Second Language Research*, 26(3), 407–439.

Falk, Y. & Bardel, C. 2011. Object pronouns in German L3 syntax: Evidence for the L2 Status Factor. *Second Language Research*, 27(1), 59 –82.

Falk, Y. & Bardel, C. 2010. The study of the role of the background languages in third language acquisition. The state of the art. *IRAL: International Review of Applied Linguistics in Language Teaching*, 48(2/3), 185–219.

Fernández Soriano, O. 1999. El pronombre personal. Formas y distribuciones. Pronombre átonos y tónicos. In I. Bosque & V. Demonte (Eds) *Gramática descriptiva de la lengua española* (pp. 1209– 1273). Madrid: Espasa.

Flynn, S. 2009. UG and L3 acquisition: new insights and more questions. In Y. I. Leung (Ed) *Third language acquisition and universal grammar* (pp. 71–88). Clevedon: Multilingual Matters.

Flynn, S., Foley, C. & Vinnitskaya, I. 2004. The Cumulative-Enhancement Model for language acquisition. *International Journal of Multilingualism*, 1(1), 3–16.

Foote, R. 2009. Transfer in L3 acquisition: The role of typology. In Y. I. Leung (Ed) *Third language acquisition and universal grammar* (pp. 89–113). Clevedon: Multilingual Matters.

Forchheimer, P. 1953. *The category of person in language*, Berlin: Walter de Gruyter.

Freire, G. C. 2005. *A realização do dativo e do acusativo anafóricos de Terceira pessoa na escrita brasileira e lusitana*. PhD dissertation. Rio de Janeiro: Universidade Federal do Rio de Janeiro.

Freire, G. C. 2000. *Os clíticos de terceira pessoa e as estratégias para a sua substituição na fala culta brasileira e lusitana*. Master thesis. Rio de Janeiro: Universidade Federal do Rio de Janeiro.

Galves, C. 1993. O enfraquecimento da concordância no português brasileiro. In I. Roberts & M. Kato (Eds) *Português brasileiro uma viagem diacrônica: homenagem a Fernando Tarallo* (pp. 387–408). Campinas: Editora da UNICAMP.

Galves, C., Morais, M. A. T. & Ribeiro, I. 2005. Syntax and morphology in the placement of clitics in European and Brazilian Portuguese M. Kato & J. Peres (Eds) *Journal of Portuguese Linguistics*, 4(2), 143–177.

García Mayo, M. del P. 2012. Cognitive approaches to L3 acquisition. *International Journal of English Studies*, 12(1), 129–146.

García Mayo, M. del P. & Rothman, J. 2012. L3 morphosyntax in the generative tradition. In J. Cabrelli Amaro, S. Flynn, & J. Rothman (Eds) *Third language acquisition in adulthood* (pp. 9–32). Amsterdam/Philadelphia: John Benjamins.

Genesee, F. 2006. Bilingual first language acquisition in perspective. In E. Hoff & P. McCardle (Eds) *Childhood Bilingualism* (pp. 45–67). Clevedon: Multilingual Matters.

Goldberg, A. E. 1995. *Constructions : a construction grammar approach to argument structure*. Chicago: University of Chicago Press.

Gomes, C. A. 2003. Variação e mudança na expressão do dativo no português brasileiro. In M. C. Paiva & M. E. Duarte (Eds) *Mudança lingüística em tempo real* (pp. 81–96). Rio de Janeiro: Contra Capa/FAPERJ.

Grosjean, F. 1992. Another view of bilingualism. In R. J. Harris (Ed) *Cognitive Processing in Bilinguals* (pp. 51–62). Amsterdam: North Holland.

Hammarberg, B. 2009. *Processes in Third Language Acquisition*. Edinburgh: Edinburgh University Press.

Hammarberg, B. 2001. Roles of L1 and L2 in L3 production and acquisition. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 21–41). Clevedon: Multilingual Matters.

Harley, H. 2002. Possession and the double object construction. *Linguistic Variation Yearbook*, 2(1), 31–70.

Hartsuiker, R.J., Pickering, M.J. & Veltkamp, E. 2004. Is Syntax Separate or Shared Between Languages? Psychological Science, 15(6), 409–414.

Inagaki, S. 1997. Japanese and Chinese learners' acquisition of the narrow-range rules for the dative alternation in English. *Language Learning*, 47, 637–669.

Ionin, T., Grolla, E., Montrul, S., Santos, H. S. in press. When articles have different meanings: acquiring the expression of genericity in English and Brazilian Portuguese. In P. Cabredo Hoffeher & A. Zribi-Hertz (Eds) *Languages with and without articles*. Syntax and Semantics.

Ionin, T., Montrul, S. & Crivos, M. 2013. A bidirectional study on the acquisition of plural NP interpretation in English and Spanish. *Applied Psycholinguistics*, 34(3), 483–518.

Ionin, T., Montrul, S. & Santos, H. 2011. Transfer in L2 and L3 acquisition of generic interpretation. In N. Davis, K. Mesh & H. Sung (Eds) *Proceedings of the 35th annual Boston University Conference on Language Development* (pp. 283–295). Boston, MA: Cascadilla Press.

Jaensch, C. 2011. L3 acquisition of German adjectival inflection: A generative account. *Second Language Research*, 27(1), 83 –105.

Jaensch, C. 2009. L3 enhanced feature sensitivity as a result of higher proficiency in the L2. In Y. I. Leung (Ed) *Third language acquisition and universal grammar* (pp. 115–143). Clevedon: Multilingual Matters.

Jin, F. 2009. Third language acquisition of Norwegian objects: interlanguage transfer or L1 influence? In Y. I. Leung (Ed) *Third language acquisition and universal grammar* (pp. 144–161). Clevedon: Multilingual Matters.

Kayne, R. S. 1984. *Connectedness and binary branching*. Dordrecht: Foris.

Kellerman, E. 1995. Crosslinguistic influence: transfer to nowhere? *Annual Review of Applied Linguistics*, 15, 125–50.

Kellerman, E. 1983. Now you see it, now you don't. In S. Gass & L. Selinker (Eds) *Language transfer in language learning* (pp. 112–134). Rowley: Newbury House Publishers.

Kellerman, E. 1979. Transfer and non-transfer: where we are now. *Studies in Second Language Acquisition*, 2(01), 37–57.

Kellerman, E. 1978. Giving learners a break: native language intuitions as a source of predictions about transferability. *Working Papers on Bilingualism*, 15, 59–92.

Kiffler, M. 2002. Register variation in Brazilian Portuguese inalienable possession. *STUF - Sprachtypologie und Universalienforschung*, 55(2), 121–140.

Klein, E.C. 1995. Second versus third language acquisition: is there a difference? *Language Learning*, 45(3), 419–466.

Krifka, M. 2004. Semantic and pragmatic conditions for the dative alternation. *Korean Journal of English Language and Linguistics*, 4, 1–32.

Lado, R. 1957. *Linguistics across Cultures*. Ann Arbor: University of Michigan Press.

Larsen-Freeman, D. & Long, M. 1991. *An introduction to second language acquisition research*. London: Longman.

Larson, R. K. 1990. Double objects revisited: reply to Jackendoff. *Linguistic Inquiry*, 21(4), 589–632.

Larson, R. K. 1988. On the double object construction. *Linguistic Inquiry*, 19(3), 335–391.

Leung, Y.I. 2007. Third language acquisition: why it is interesting to generative linguists. *Second Language Research*, 23(1), 95–114.

Leung, Y.I. 2006. Verb morphology in second language versus third language acquisition: the representation of regular and irregular past participles in English-Spanish and Chinese-English-Spanish interlanguages. *EUROSLA Yearbook*, 6, 27–56.

Leung, Y.I. 2005. L2 vs. L3 initial state: A comparative study of the acquisition of French DPs by Vietnamese monolinguals and Cantonese–English bilinguals. *Bilingualism: Language and Cognition*, 8(01), 39–61.

Levin, B. 1993. *English verb classes and alternations: a preliminary investigation*. Chicago: University of Chicago Press.

Liu, Q. 2011. Factors influencing pronunciation accuracy: L1 negative transfer, task variables and individual aptitude. *English Language Teaching*, 4(4), 115–120.

Loebell, H. & Bock, K. 2003. Structural priming across languages. *Linguistics*, 41(5).

Lozano, C. 2002. The interpretation of overt and null pronouns in non-native Spanish. *Durham Working Papers in Linguistics*, 8, 53–66.

Marantz, A. 1993. Implications of asymmetries in double object constructions. In S. A. Mchombo (Ed) *Theoretical aspects of Bantu grammar* (pp. 113–151). CSLI lecture notes. Stanford, CA: CSLI.

Marantz, A. 1984. *On the nature of grammatical relations*, Cambridge Mass: MIT Press.

Masullo, P. 1992. *Incorporation and case theory in Spanish: a crosslinguistic perspective*. PhD dissertation. University of Washington.

Mazurkewich, I. 1984. The acquisition of the dative alternation by second language learners and linguistic theory. *Language Learning*, 34(1), 91–109.

Monteiro, J.L. 1994. *Pronomes do Brasil*, Fortaleza: Edições UFC.

Montrul, S. 2010. Dominant language transfer in adult second language learners and heritage speakers. *Second Language Research*, 26(3), 293–327.

Montrul, S. 2008. *Incomplete acquisition in bilingualism: re-examining the age factor*. Amsterdam/Philadelphia: John Benjamins.

Montrul, S. 2006. Incomplete acquisition as a feature of bilingual and L2 grammars. In R. Slabakova, S Montrul, & P. Prévost (Eds) *Inquiries in Linguistic Development. In honor of Lydia White* (pp. 335–359). Amsterdam/Philadelphia: John Benjamins.

Montrul, S. 2004. Subject and object expression in Spanish heritage speakers: A case of morphosyntactic convergence. *Bilingualism: Language and Cognition*, 7(2), 125–142.

Montrul, S. 2000. Transitivity alternations in L2 acquisition: toward a modular view of transfer. *Studies in Second Language Acquisition*, 22(02), 229–273.

Montrul, S. 1997. On the parallels between diachronic change and interlanguage grammars: the L2 acquisition of the Spanish dative case system. *Spanish Applied Linguistics*, 1, 87–113.

Montrul, S., Dias, R. & Santos, H. 2011. Clitics and object expression in the L3 acquisition of Brazilian Portuguese: structural similarity matters for transfer. *Second Language Research*, 27(1), 21 –58.

Montrul, S., Dias, R. & Santos, H. 2009a. On some null subject parameter-related properties in the L3 acquisition of Brazilian Portuguese. *Revista de Estudos da Lingua(gem)*, 7(Special Issue), 163–198.

Montrul, S. & Ionin, T. 2010. Transfer effects in the interpretation of definite articles by Spanish heritage speakers. *Bilingualism: Language and Cognition*, 13(4), 449–473.

Montrul, S., Williams, A. C. T. & Prince, R. 2009b. Subject expression in the L2 acquisition of Brazilian Portuguese. In A. Pires & J. Rothman (Eds) *Minimalist Inquiries into Child and Adult Language Acquisition* (pp. 301–326). Berlin/New York: Mouton de Gruyter.

Müller, N. & Hulk, A. 2001. Cross-linguistic influence in bilingual language acquisition: Italian and French as recipient languages. Bilingualism: *Language and Cognition*, 4, 1–21.

Na Ranong, S. & Leung, Y.I. 2009. Null objects in L1 Thai-L2 English-L3 Chinese: an empiricist take on a theoretical problem. In Y. I. Leung (Ed) *Third language acquisition and universal grammar* (pp. 162–191). Clevedon: Multilingual Matters.

Odlin, T. 1989. *Language transfer : cross-linguistic influence in language learning*. New York: Cambridge University Press.

Oh, E. & Zubizarreta, M. L. 2005. The asymmetric behavior of goal and benefactive double objects in the English interlanguage of adult L1 Korean and L1 Japanese speakers. In L. Dekydtspotter (Ed) *Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference* (pp. 193–204). Somerville, MA: Cascadilla Proceedings Project.

Oliveira e Silva, G. 1977. *Perspectiva sociolingüística de algumas formas acusativas de tratamento no português do Rio de Janeiro*. Rio de Janeiro: Museu Nacional.

Omena, N. P. de 1996. A referência à primeira pessoa do discurso no plural. In G. Oliveira e Silva & M. M. P. Scherre (Eds) *Padrões sociolingüísticos* (pp. 185–212). Rio de Janeiro: Tempo Brasileiro.

Pagotto, E. 1993. Clíticos, mudança e seleção natural. In I. Roberts & M. Kato (Eds) *Português brasileiro uma viagem diacrônica: homenagem a Fernando Tarallo* (pp. 185–206). Campinas: Editora da UNICAMP.

Paradis, M. 1994. Neurolinguistic aspects of implicit and explicit memory: implications for bilingualism and SLA. In N. Ellis (Ed) *Implicit and explicit learning of languages* (pp. 393–419). London: Academic Press.

Pavlenko, A. 2000. L2 influence on L1 in late bilingualism. *Issues in Applied Linguistics*, 11(2), 175–205.

Perpiñán, S. & Montrul, S. 2006. On binding asymmetries in dative alternation constructions in L2 Spanish. In C. Klee & T. L. Face (Eds) *Selected Proceedings of the 7th Conference on the Acquisition of Spanish and Portuguese as First and Second Languages* (pp. 135–148). Somerville, MA: Cascadilla Proceedings Project.

Pinker, S. 1989. *Learnability and Cognition*. Cambridge, MA: MIT Press.

Pujalte, M. in press. (Non)-added datives in Spanish. In Y. Fainleib, N. LaCara, & Y. Park (Eds) *Proceedings of NELS 41*. Amherst, MA: GLSA.

Pylkkänen, M. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.

Pylkkänen, M. 2002. *Introducing arguments*. PhD dissertation. Massachusetts Institute of Technology.

Ravem, R. 1968. Language Acquisition in a second language environment. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 6(2), 175–185.

Ringbom, H. 2007. *Cross-linguistic similarity in foreign language learning*. Clevedon: Multilingual Matters.

Ringbom, H. 2001. Lexical transfer in L3 production. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds) *Crosslinguistic influence in third language acquisition: psycholinguistic perspectives* (pp. 59–68). Clevedon: Multilingual Matters.

Ringbom, H. & Jarvis, S. 2009. The importance of cross-linguistic similarity in foreign language learning. In M. H. Long & C. J. Doughty (Eds) *The Handbook of Language Teaching* (pp. 106–118). Malden: MA: Wiley-Blackwell.

Rothman, J. 2011. L3 syntactic transfer selectivity and typological determinacy: The typological primacy model. *Second Language Research*, 27(1), 107 –127.

Rothman, J. 2010. On the typological economy of syntactic transfer: word order and relative clause high/low attachment preference in L3 Brazilian Portuguese. *International Review of Applied Linguistics in Language Teaching (IRAL)*, 48(2-3), 245–273.

Rothman, J. & Cabrelli Amaro, J. 2010. What variables condition syntactic transfer? A look at the L3 initial state. *Second Language Research*, 26(2), 189–218.

Rothman, J., Iverson, M. & Judy, T. 2011. Introduction: some notes on the generative study of L3 acquisition. *Second Language Research*, 27(1), 5 –19.

Salaberry, R. 2005. Evidence for transfer of knowledge of aspect from L2 Spanish to L3 Portuguese. In D. Ayoun & R. Salaberry (Eds) *Tense and aspect in Romance Languages: theoretical and applied perspectives*. Philadelphia: John Benjamins, pp. 179–210.

Salles, H. M. M. L. 1997. *Prepositions and the syntax of complementation*. PhD dissertation. University of Wales.

Salles, H. M. M. L. & Scherre, M. M. 2003. Indirect objects in Brazilian Portuguese and in English. In R. Núñez-Cedeño, L. López, & R. Cameron (Eds) *A romance perspective on language knowledge and use*. Selected papers from the 31st Linguistic Symposium on Romance Languages (pp. 151–165). Amsterdam/Philadelphia: John Benjamins.

Sanz, C. 2000. Bilingual education enhances third language acquisition: Evidence from Catalonia. *Applied Psycholinguistics*, 21(01), 23–44.

Sawyer, M. 1996. L1 and L2 sensitivity to semantic constraints on argument structure. In A. Stringfellow, D. Cahana-Amitay, E. Highes & A. Zukowiski (Eds) *Proceedings of the 20th Annual Boston University Conference on Language Development* (pp. 646–657). Somerville, MA: Cascadilla.

Schumann, J .H. 1979. The acquisition of English negation by speakers of Spanish: a review of the literature. In R. W. Andersen (Ed) *The Acquisition and Use of Spanish and English as First and Second Languages* (pp. 3–32). Washington: TESOL, Georgetown University.

Schwartz, B.D. & Sprouse, R.A. 1996. L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research*, 12(1), 40–72.

Schwartz, B. D. & Sprouse, R. A. 1994. Word order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage. In T. Hoekstra & B. Schwartz (Eds) *Language acquisition studies in generative grammar: papers in honor of Kenneth Wexler from the 1991 GLOW workshops* (pp. 317–368). Philadelphia: John Benjamins.

Silva-Corvalán, C. 1984. Semantic and pragmatic factors in syntactic change. In J. Fisiak (Ed) *Historical Syntax* (pp. 555–573). Berlin: Mouton.

Silva, M. C. F. 2007. A perda do marcador dativo e algumas de suas consequências. In A. T. de Castilho, M. A. Tores Morais, R. E. V. Lopes & S. M. L. Cyrino (Eds) *Descrição, história e aquisição do português brasileiro* (pp. 85–110). Campinas/São Paulo: Pontes/FAPESP.

Singleton, D. & O'Laoire, M. 2006. Psychotypologie et facteur L2 dans l'influence translexicale. *Acquisition et interaction en langue étrangère*, 24, 101–117.

Skehan, P. 2008. Interlanguage and language transfer. In B. Spolsky & F. Hult (Eds) *The Handbook of Educational Linguistics* (pp. 411–423). Malden, MA: Blackwell Publishing.

Skinner, B.F. 1957. *Verbal Behavior*, Cambridge, MA: Prentice Hall.

Slabakova, R. 2006. L1 transfer revisited: the L2 acquisition of telicity marking in English by Spanish and Bulgarian native speakers. *Linguistics*, 38(4), 623–827.

Slabakova, R. 2008. *Meaning in the second language*. Berlin: Mouton de Gruyter.

Sorace, A. & Filiaci, F. 2006. Anaphora resolution in near-native speakers of Italian. *Second Language Research*, 22(3), 339–368.

Sorace, A. 2000. Syntactic optionality in non-native grammars. *Second Language Research*, 16(2), 93–102.

Spivey, M.J. & Marian, V. 1999. Cross Talk Between Native and Second Languages: Partial Activation of an Irrelevant Lexicon. *Psychological Science*, 10(3), 281–284.

Suñer, M. 1988. The role of agreement in clitic-doubled constructions. *Natural Language & Linguistic Theory*, 6(3), 391–434.

Tarallo, F. 1993. Diagnosticando uma gramática brasileira: o português d'aquém e d'além mar ao final do século XIX. In I. Roberts & M. Kato (Eds) *Português brasileiro uma viagem diacrônica: homenagem a Fernando Tarallo* (pp. 69–105). Campinas: Editora da UNICAMP.

Torres Morais, M.A. 2006. Argumentos dativos: um cenário para o núcleo aplicativo no português europeu. *Revista da ABRALIN*, 5, 239–266.

Torres Morais, M.A. & Berlink, R. 2007. "Eu disse pra ele" ou "disse-lhe a ele": a expressão do dativo nas variedades brasileira e européia do português. In A. T. de Castilho, M. A. Tores Morais, R. E. V. Lopes & S. M. L. Cyrino (Eds) *Descrição, história e aquisição do português brasileiro* (pp. 61–84). Campinas/São Paulo: Pontes/FAPESP.

Torres Morais, M. A. & Berlink, R. 2006. A caracterização do objeto indireto no português: aspectos sincrônicos e diacrônicos. In T. Lobo, I. Ribeiro Z. Carneiro & N. Almeida (Eds) *Para a história do Português Brasileiro: novos dados, novas* analyses (pp. 73–106). Salvador: EDUFBA.

Torres Morais, M.A. & Salles, H. M. M. L. 2010. Parametric change in the grammatical encoding of indirect objects in Brazilian Portuguese. Probus: International Journal of Latin & Romance Linguistics, 22(2), 181–209.

Torres Morais, M. A. 2007. *Dativos*. Unpublished manuscript. São Paulo: Universidade de São Paulo.

Tsimpli, I., Sorace, A., Heycock, C. & Filiaci, F. 2004. First language attrition and syntactic subjects: A study of Greek and Italian near-native speakers of English. *International Journal of Bilingualism*, 8(3), 257–277.

Vainikka, A. & Young-Scholten, M. 1996. Gradual development of L2 phrase structure. *Second Language Research*, 12(1), 7–39.

Weissenrieder, M. 1995. Indirect object doubling: saying things twice in Spanish. *Hispania*, 78(1), 169–177.

White, L. 2003. On the nature of interlanguage representation: Universal grammar in the second language. In C. Doughty & M. Long (Eds) *Handbook of Second Language Acquisition* (pp. 19–42). Oxford: Blackwell Publishing.

White, L. 1991. Argument structure in second language acquisition. *Journal of French Language Studies*, 1(02), 189–207.

White, L. 1987. Markedness and second language acquisition. *Studies in Second Language Acquisition*, 9(03), 261–285.

Whong-Barr, M. & Schwartz, B. D. 2002. Morphological and syntactic transfer in child L2 acquisition of the English dative alternation. *Studies in Second Language Acquisition*, 24(4), 579–616.

Williams, S. & Hammarberg, B. 1998. Language switches in L3 production: implications for a polyglot speaking model. *Applied Linguistics*, 19(3), 295–333.

Yang, C. 2002. *Knowledge and learning in natural language*. New York: Oxford University Press.

# Appendix A:

# Acceptability judgment task of Study 1 with BP native speakers

*Goal/PP/1st person*

1) A minha vizinha é muito fofoqueira. Ontem ela veio falar comigo e contou a história da briga para mim com todos os detalhes.
2) No dia dos namorados, o meu marido trouxe um lindo buquê de flores para mim.
3) Faz anos que o Luis mora fora do país e nunca mandou sequer um e-mail para mim.
4) O carteiro bateu na porta. Quando eu abri, ele entregou um pacote para mim.

*Goal/PP/3rd person*

1) A tia do Pedro é muito fofoqueira. Ontem ela ligou e contou o caso de traição para o sobrinho com todos os detalhes.
2) No dia das mães, o Pedro trouxe um vaso de flores para a Dona Gertrudes, a mãe dele.
3) Faz muitos anos que a Marina mora na Europa e nunca mandou uma carta para a mãe dela.
4) A secretária foi até a sala da diretoria, bateu na porta e entregou os documentos para o diretor.

*Goal/dative clitic/1st person*

1) A minha vizinha é muito fofoqueira. Ontem ela veio falar comigo e me contou a história da briga com todos os detalhes.
2) No dia dos namorados, o meu marido me trouxe um lindo buquê de flores.
3) Faz anos que o Luis mora fora do país e nunca me mandou um e-mail sequer.
4) O carteiro bateu na porta. Quando eu abri, ele me entregou um pacote.

*Goal/dative clitic/3rd person*

1) A tia do Pedro é muito fofoqueira. Ontem ela ligou e lhe contou o caso de traição com todos os detalhes.
2) A Dona Gertrudes estava muito contente porque no dia da mães o seu filho Pedro lhe trouxe um vaso de flores.
3) A mãe da Marina está sempre muito triste porque faz anos que a filha mora na Europa e nunca lhe mandou uma carta.
4) A secretária foi até a sala do diretor, bateu na porta e lhe entregou os documentos.

*Goal/a+DP/1st person*

1) *A minha vizinha é muito fofoqueira. Ontem ela veio falar comigo e contou a história da briga a mim com todos os detalhes.
2) *No dia dos namorados, o meu marido trouxe um lindo buquê de flores a mim.
3) *Faz anos que o Luis mora fora do país e nunca mandou sequer um e-mail a mim.
4) *O carteiro bateu na porta. Quando eu abri, ele entregou um pacote a mim.

*Goal/a+DP/3rd person*

1) A tia do Pedro é muito fofoqueira. Ontem ela ligou e contou o caso de traição ao sobrinho com todos os detalhes.
2) No dia das mães, o Pedro trouxe um vaso de flores à Dona Gertrudes, a mãe dele.
3) Faz muitos anos que a Marina mora na Europa e nunca mandou uma carta à mãe dela.
4) A secretária foi até a sala da diretoria, bateu na porta e entregou os documentos ao diretor.

*Source/PP/1st person*

1) Depois da separação, eu estou com medo que a minha esposa tire os meus filhos de mim.
2) Eu cheguei tarde no trabalho ontem e o meu chefe exigiu de mim uma explicação.
3) Dois ladrões me assaltaram ontem à noite e roubaram a minha carteira.

*Source/PP/3rd person*

1) Depois da separação, todos estavam achando que a Marta tiraria os filhos do Jorge.
2) O chefe ficou nervoso com os atrasos frequentes e exigiu uma explicação do funcionário.
3) Durante o assalto de ontem à noite os ladrões roubaram a carteira do meu primo.

*Source/dative clitic/1st person*

1) Depois da separação eu estou com medo que a minha ex-mulher me tire os filhos.
2) Eu cheguei tarde no trabalho ontem e o meu chefe me exigiu uma explicação.
3) Dois ladrões me assaltaram ontem à noite e me roubaram a carteira.

*Source/dative clitic/3rd person*

1) Depois da separação a Paula achou que o Rogério lhe tiraria os filhos.
2) O chefe ficou nervoso com os atrasos freqüentes do funcionário e lhe exigiu uma explicação.(9)
3) Dois ladrões assaltaram o meu primo ontem e lhe roubaram a carteira.

*Source/a+DP/*1st person

1) *Depois da separação eu estava com medo que o meu ex-marido tirasse os filhos a mim.
2) *Eu cheguei tarde no trabalho ontem e o meu chefe exigiu uma explicação a mim.
3) *Dois ladrões me assaltaram ontem à noite e roubaram a carteira a mim.

*Source/a+DP/3rd person*

1) Depois da separação todos já estavam sabendo que o Rogério tiraria os filhos à Paula.
2) O chefe ficou nervoso com os atrasos frequentes e exigiu uma explicação ao funcionário.
3) Durante o assalto de ontem à noite os ladrões roubaram a carteira ao meu primo.

*Benefactive/PP/1st person*

1) A minha avó é muito atenciosa e no meu aniversário ela sempre compra um presente para mim.
2) Os meus amigos fizeram uma festa surpresa para mim quando terminei meu doutorado.
3) Meu marido preparava o jantar para mim quando eu chegava tarde em casa.
4) O meu pai lia os livros do Monteiro Lobato para mim quando eu era criança.

*Benefactive/PP/3rd person*

1) A Dona Francisca é uma avó muito dedicada pois ela sempre compra um presente para o Lucas no aniversário dele.
2) Os alunos fizeram uma festa de despedida para o professor quando ele se aposentou.
3) Os anfitriões prepararam um jantar muito elegante para os convidados de honra.
4) A professora leu o texto para os alunos na aula de língua estrangeira.

*Benefactive/dative clitic/1st person*

1) A minha avó é muito atenciosa e no meu aniversário ela sempre me compra um presente.
2) Os meus amigos me fizeram uma festa surpresa quando terminei meu doutorado.
3) Meu marido me preparava o jantar quando eu chegava tarde em casa.
4) O meu pai me lia os livros do Monteiro Lobato quando eu era criança.

*Benefactive/dative clitic/3rd person*

1) A Dona Francisca adora o neto pois sempre lhe compra um presente no aniversário dele.
2) Quando o professor se aposentou, os alunos lhe fizeram uma festa de despedida.

3) Os convidados de honra estavam muito bem impressionados porque os seus anfitriões lhes prepararam um jantar impecável.
4) Como os alunos tinham dúvidas de pronúncia, a professora lhes leu o texto.

*Benefactive/a+DP/1st person*

1) *A minha avó é muito atenciosa e no meu aniversário ela sempre compra um presente a mim.
2) *Os meus amigos fizeram uma festa surpresa a mim quando terminei meu doutorado.
3) *Meu marido preparava o jantar a mim quando eu chegava tarde em casa.
4) *O meu pai lia os livros do Monteiro Lobato a mim quando eu era criança.

*Benefactive/a+DP/3rd person*

1) A Dona Francisca é uma avó muito dedicada e ela sempre compra um presente ao Lucas no aniversário dele.
2) Os alunos fizeram uma festa de despedida ao professor quando ele se aposentou.
3) Os anfitriões prepararam um jantar muito elegante aos convidados de honra.
4) A professora leu o texto aos alunos na aula de língua estrangeira.

*Possessor/PP/1st person*

1) Meu cabelo estava muito comprido então ontem fui ao cabeleireiro e ele cortou meu cabelo bem curtinho.
2) Quando eu voltava do recreio a professora sempre lavava as minhas mãos.

*Possessor/PP/3rd person*

1) A Patrícia queria mudar o visual então ela foi ao cabeleireiro e ele cortou o cabelo dela bem curtinho.
2) Depois do recreio a professora sempre lavava as mãos dos alunos.

*Possessor/dative clitic/1st person*

1) ?Meu cabelo estava muito comprido então ontem fui ao cabeleireiro e ele me cortou o cabelo bem curtinho.
2) ?Quando eu voltava do recreio a professora me lavava as mãos.

*Possessor/dative clitic/3rd person*

1) ?A Patrícia queria mudar o visual então ela foi ao cabeleireiro e ele lhe cortou o cabelo bem curtinho.
2) ?Quando os alunos voltavam do recreio a professora lhes lavava as mãos.

*Possessor/a+DP/1st person*

1) *Meu cabelo estava muito comprido então ontem fui ao cabeleireiro e ele cortou o cabelo a mim bem curtinho.
2) *Quando eu voltava do recreio a professora lavava as mãos a mim.

*Possessor/a+DP/3rd person*

1) *O cabeleireiro cortou o cabelo à Patrícia mas ela achou que ficou curto demais.
2) *Depois do recreio a professora lavava as mãos aos alunos.

*Fillers*

1) No sábado à tarde o Pedro foi ao teatro comigo e nós assistimos uma peça excelente.
2) No sábado à tarde a Julia foi ao parque com a mãe dela e elas se divertiram muito.
3) O Rafael esqueceu o material dele na minha casa e não estudou para a prova de matemática.
4) O Rafael esqueceu o material dele na sua casa e não estudou para a prova de história.
5) Minha mãe vem me visitar no próximo mês e vai passar duas semanas na minha casa.
6) Como o Gustavo percebeu que eu estava muito triste, ele me abraçou forte.
7) Como o Gustavo percebeu que a Cristina estava muito triste, ele deu um abraçou forte nela.
8) Quando eu quebrei o vaso da Marisa ela me olhou com raiva.
9) Quando Paulo quebrou a janela da vizinha, ela ficou muito brava com ele.
10) Combinei de ir a um concerto com Luis e ele encontrou comigo na porta do teatro.
11) Eu e a Luisa combinamos de assistir um filme juntas e nos encontramos na porta do cinema.
12) Minha cunhada comprou um carro novo mas está com medo de ser roubada.
13) Teu irmão decidiu não viajar de férias porque está com medo de andar de avião.
14) Estou com medo de andar de avião e por isso decidi cancelar as minhas férias.
15) Roberto cancelou a reunião porque estava muito doente ontem e não veio trabalhar.
16) Maurício foi para o Rio de Janeiro encontrar com um amigo de infância.
17) Felipe está procurando uma casa para comprar porque a sua está muito pequena.
18) Marisa cumprimentou o meu irmão quando eles se viram na porta do restaurante.
19) *A sua irmã vai visitar a ele todos os finais de semana e leva muitos presentes.
20) *No sábado à tarde a Julia foi pelo parque com a mãe dela e elas se divertiram muito.
21) *A mãe da Flávia vai visitar para ela no próximo mês e vai passar duas semanas na casa dela.
22) *Quando o Pedro reencontrou o Jorge depois de anos sem eles se verem, o Pedro abraçou ao Jorge.
23) *Quando Juliana quebrou a taça de cristal da mãe dela, a mãe ficou muito brava por ela.

24)*Combinei de assistir uma peça para Luis e ele encontrou comigo na porta do teatro.
25)*Minha irmã comprou de um carro importado mas está com medo de ser roubada.
26)*Sua mãe decidiu não viajar de férias porque está por medo de andar de avião.
27)*Roberto cancelou da reunião porque estava muito doente ontem e não veio trabalhar.
28)*Julia foi para Salvador encontrar por um amigo de infância.
29)*Felipe está procurando a uma casa para comprar porque a sua está muito pequena.
30)*Maria cumprimentou ao meu irmão quando eles se viram na porta da escola.
31)*No sábado à tarde o Jorge foi ao teatro por mim e nós assistimos uma peça excelente.
32)*O Rafael esqueceu o livro dele na minha casa e não estudou com a prova de geografia.
33)*Marta leva aos filhos na escola todos os dias pela manhã antes de ir para o trabalho.
34)*Marta leva para os filhos na escola todos os dias pela manhã antes de ir para o trabalho.
35)*A minha avó adora aos netos mas o preferido dela é o Gabriel, que é o neto mais novo.
36)*A minha tia adora para os sobrinhos, mas o preferido dela é o Julio, que é o sobrinho mais velho.
37)*Alexandre busca aos filhos na escola quando ele sai do trabalho.
38)*Marli busca pelas filhas na aula de balé quando ela sai do trabalho.
39)*A criança olhou ao homem que passava na porta de casa e saiu correndo.
40)*A menina olhou no homem que apareceu na porta da sala e saiu correndo.
41)*O ladrão roubou ao meu pai e levou todo o dinheiro que ele tinha.
42)*O ladrão roubou para o meu irmão e levou tudo que ele tinha.
43)*A moça beijou ao rapaz quando eles chegaram na porta da casa dela.
44)*O rapaz beijou para a moça quando eles estacionaram na porta da casa dela.

*Scale*

1 = completamente impossível

2 = provavelmente impossível

3 = provavelmente possível

4 = perfeitamente possível

não sei

# Appendix B:

# Grammaticality judgment task of Study with L3 BP learners

*PP/1st person*

1) Minha avó contou todas as novidades para mim.
2) Meu marido deu um buquê de flores para mim.
3) Meu primo mandou um recado para mim.
4) A Ana mostrou as fotos do casamento para mim.

*PP/3rd person*

1) A tia do Rodrigo contou os detalhes da briga para ele.
2) A mãe da Paula deu um celular novo para ela.
3) O namorado da Marina mandou um cartão postal para ela.
4) O amigo do meu irmão mostrou as fotos da viagem para ele.

*Dative clitic/1st person*

1) Minha tia me contou os segredos da família.
2) Meu amigo me deu um livro de contos.
3) A Luísa me mandou um cartão de aniversário.
4) A Patrícia me mostrou todos os cômodos da casa.

*Dative clitic/3rd person*

1) A avó da Joana lhe contou várias histórias do passado.
2) O pai do Pedro lhe deu uma máquina fotográfica.
3) A namorada do João lhe mandou um email.
4) A mãe do menino lhe mostrou a árvore de Natal.

*Clitic doubling/3rd person*

1) *Minha vizinha lhe contou uma história triste ao meu pai.
2) *A Julia lhe deu uma calça jeans moderna ao marido dela.
3) *A Daniela lhe mandou uma mensagem de texto ao Paulo.
4) *Eu lhe mostrei meu computador novo ao meu irmão.

*English-type DOC/3rd person*

1) *Meu irmão contou meu pai todos os problemas dele.
2) *A Paula deu o filho dela uma bicicleta nova.
3) *O Julio mandou os pais dele o dinheiro do aluguel.
4) *Eu mostrei meu chefe minhas idéias para o projeto.

*Fillers:*

1) A Teresa vai sair de férias com o marido e os filhos.
2) Meu cunhado queria fazer um churrasco na casa dele.
3) O ladrão desceu correndo pelas escadas do prédio.
4) Eu tenho uma ótima relação com os meus colegas.
5) O João gosta de assistir televisão antes de dormir.
6) A Ana vai convidar o Daniel para jantar na casa dela.
7) Meu sobrinho vai visitar os pais nos fins de semana.
8) O chefe chamou todos os funcionários para a reunião.
9) *O Paulo vão passear no zoológico com os filhos.
10)*Minha cunhada queriam comprar um carro novo.
11)*A Juliana saíram correndo atrás dos filhos.
12)*Meus amigos temos medo de andar de avião.
13)*Eu gostam de ler um pouco antes de ir para a cama.
14)*A Priscila vai convidar ao namorado para viajar com ela.
15)*O Rodrigo vem visitar aos pais uma vez por ano.
16)*A Dona Jandira chamou aos netos para comer o bolo.
17)*Eu ajudo aos meus irmãos menores com a lição de casa.
18) *Meu pai ajudaram meu irmão a resolver o problema.
19)*A tia Marta levamos meu primo no aeroporto.
20)*A Adriana vão trazer uma garrafa de vinho.
21)*A secretária enviam os documentos por fax.
22)*O professor repetem a explicação várias vezes.
23)*Minha mãe trabalhamos com o seu cunhado.
24)*O médico examinam os pacientes com cuidado.

*Scale*

1 = completely unacceptable/completamente impossível

2

3

4 = perfectly acceptable/perfeitamente possível

don’t know/não sei

# Appendix C:

# Acceptability judgment task of Study with L3 BP learners

*Goal*

1) Meu pai me emprestou o carro no fim de semana.
2) A professora me ensinou o significado dessas palavras.
3) Os alunos me perguntaram todas as dúvidas deles.
4) Meu marido me prometeu uma viagem para Paris.

*Source*

1) Trabalhar com você me exigiu muita paciência.
2) As preocupações com o trabalho me tiraram o sono.
3) A escola do meu filho me cobrou uma multa.
4) Os trombadinhas me roubaram a bicicleta.

*Benefactive*

1) A Ana me comprou um vestido de presente.
2) Meu pai me construiu uma casinha de madeira.
3) Minha avó me preparou meu prato predileto.
4) Meu avô me compôs uma música.

*Possessor*

1) ?O cabeleireiro me cortou o cabelo bem curtinho.
2) ?O Roberto me reconheceu a voz imediatamente.
3) ?Meu pai me beijou a testa antes de ir embora.
4) ?A astróloga me adivinhou o signo assim que me viu.

*Fillers*

1) A Joana viu ele só uma vez até agora.
2) Eu cumprimentei ela com um aperto de mão.
3) A gente abraçou ele bem forte na hora da despedida.
4) Os pais mimaram ela demais quando ela era criança.
5) O Pedro a viu no começo da festa.
6) Eu o cumprimentei na porta do supermercado.
7) Os convidados o abraçaram para dar os parabéns.
8) Eu a mimei muito quando ela era pequena.
9) Eu vi pela última vez na festa da Marina.
10) *O Jorge cumprimentou com um aceno de cabeça.

11)*Minha sogra abraçou na porta da igreja.
12)*Os pais mimaram demais durante a adolescência.
13)*A Marta viu ao sobrinho quando ele nasceu.
14)*Eu cumprimentei ao seu avô na esquina de casa.
15)*Minha mãe abraçou ao noivo depois da cerimônia.
16)*Meu irmão mimou ao filho quando ele era adolescente.

*Scale*

1 = completely unacceptable/completamente impossível

2

3

4 = perfectly acceptable/perfeitamente possível

don’t know/não sei

# Appendix D:

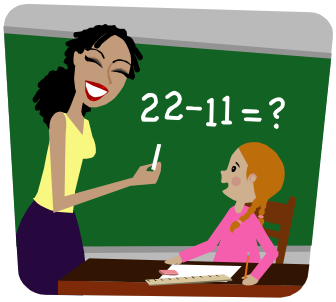
## Picture description task

The vocabulary for the Portuguese and the Spanish versions of the task is presented below each picture. For the second part of the task, when participants had to describe the scene from the perspective of one of the characters in the picture, a sentence was added below each picture indicating which character's perspective they should use for their description.

**Port:** Imagine que você é…
**Span:** Imagine que usted es…

*Goal*

**Port:** carteiro – entregar – pacote – mulher
**Span:** cartero – entregar – paquete – mujer




**Port:** professora – ensinar – matemática – menina
**Span:** profesora – enseñar – matemáticas – niña

**Port:** Luis – dar – gato – Joana
**Span:** Luis – dar – gato – Julia

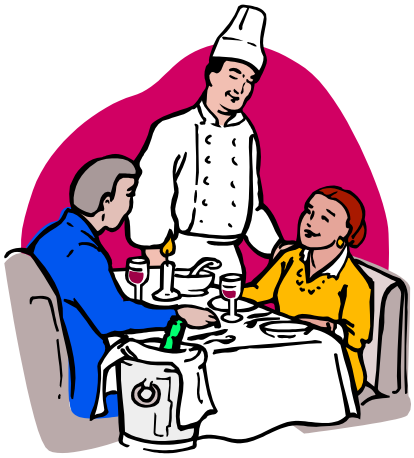
**Port:** mãe – mostrar – desenho – pai
**Span:** madre – mostrar – dibujo – padre

*Benefactive*

**Port:** mãe – ler – historinha – filha
**Span:** madre – leer – cuento – hija

**Port:** casal – cantar – música – Ana
**Span:** pareja – cantar – canción – Ana

**Port:** Julia – fazer – bolo – Carlos
**Span:** Lucía – hacer – pastel – Carlos



**Port:** cozinheiro – preparar – jantar – casal
**Span:** cocinero – preparar – cena – pareja

*Source*

**Port:** policial – cobrar – multa – motorista
**Span:** policía – cobrar – multa – conductor

**Port:** fotógrafo – tirar – foto – noiva
**Span:** fotógrafo – sacar – foto – novia

**Port:** golfinho – tomar – bola – banhista
**Span:** delfín– quitar – pelota – bañista

**Port:** filho – ganhar – jogo – pai
**Span:** hijo – ganar – juego – padre

Possessor

**Port:** mãe – lavar –cabelo – filha
**Span:** madre – lavar – pelo – hija

**Port:** cabeleireiro – cortar – cabelo – menino
**Span:** peluquero – cortar – pelo – niño

**Port:** médico – examinar – garganta – paciente
**Span:** médico – examinar – garganta – paciente

**Port:** dentista – olhar – dentes – menino
**Span:** dentista – mirar – dientes – niño

*Fillers*

**Port:** menina – ler – livro – biblioteca
**Span:** niña – leer – libro – biblioteca

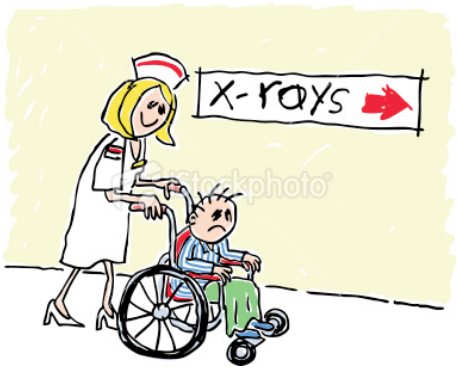
**Port:** astronauta – cumprimentar – marciano
**Span:** astronauta – saludar – marciano

**Port:** rato – correr – queijo – cabeça
**Span:** ratón – correr – queso – cabeza

Port: **menina – construir – castelo – areia**
**Span:** niña – construir – castillo – arena

**Port:** Maria – pintar – casa – verde
**Span:** María – pintar– casa – verde

**Port:** Paula – abraçar – namorado
**Span:** Paula – abrazar – novio




**Port:** enfermeira – levar – doente – raio x
**Span:** enfermera – llevar – enfermo – sala de rayos x

**Port:** cachorro – lamber – bebê
**Span:** perro – lamer – bebé

**Port:** ursos – fazer – piquenique – parque
**Span:** osos – hacer – picnic – parque

**Port:** Diego – jogar – basquete – irmão
**Span:** Diego – jugar – baloncesto – hermano

**Port:** palhaço – passear – cachorro
**Span:** payaso – pasear – perro

**Port:** avó – assistir – televisão – neta
**Span:** abuela – ver – televisión – nieta

**Port:** casal – escutar – música – carro
**Span:** pareja – escuchar – música – coche

**Port:** Bia – pular – corda
**Span:** Beatriz – saltar – cuerda

**Port:** Jorge – lavar – carro
**Span:** Jorge – lavar – coche

**Port:** menina – escrever – caderno
**Span:** niña – escribir – cuaderno

# Appendix E:

# Language Distance questionnaire

*English and Portuguese*

1) Portuguese language and English language are:
2) Portuguese language vocabulary and English language vocabulary are:
3) The words in Portuguese and in English are:
4) Portuguese language grammar and English language grammar are:
5) The structure of sentences in Portuguese and in English is:
6) Portuguese language sounds and English language sounds are:
7) The pronunciation in Portuguese and in English is:

*Spanish and Portuguese*

1) Portuguese language and Spanish language are:
2) Portuguese language vocabulary and Spanish language vocabulary are:
3) The words in Portuguese and in Spanish are:
4) Portuguese language grammar and Spanish language grammar are:
5) The structure of sentences in Portuguese and in Spanish is:
6) Portuguese language sounds and Spanish language sounds are:
7) The pronunciation in Portuguese and in Spanish is:

*Scale*

similar ___ ___ ___ ___ ___ ___ different